Technical Support Document

Final Rule

Approval of
Revisions to the Pesticide Element
of the California State Implementation Plan

Air Division
Environmental Protection Agency Region 9
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Most documents referenced in this technical support document may be found on www.regulations.gov in the docket for this rulemaking, docket no. EPA-R09- OAR-2012-0194. Documents that are not available in an electronic format may be found at the address above.

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List of Acronyms

µ: micron (one millionth)
AMAF: application method adjustment factor
ARB: California Air Resources Board (also CARB)
APCD: air pollution control district
AQMD: air quality management district
AQMP: Air Quality Management Plan
BACM: best available control measure
CAA: Federal Clean Air Act as amended in 1990
CAC: County Agricultural Commissioners
CARB: California Air Resources Board (also ARB)
CCR: California Code of Regulations
CDPR: California Department of Pesticide Regulation
CFAC: California Food and Agriculture Code
CFR: Code of Federal Regulations
CPRA: California Public Records Act
CTG: control techniques guideline
DPR: California Department of Pesticide Regulation
EP: emission potential
EPA: United States Environmental Protection Agency
Fine particulate: $PM_{2.5}$
FR: Federal Register
N/A: not applicable
MeI: methyl iodide (a fumigant)
NAA: nonattainment area
NAAQS: national ambient air quality standard
NO_x: oxides of nitrogen
NPRM: notice of proposed rulemaking
O_3: ozone
PM: particulate matter
PM_{10}: particulate matter with a diameter of 10 µm or less, includes $PM_{2.5}$
$PM_{2.5}$: particulate matter with a diameter of 2.5 µm or less
ppm: parts per million
RACM: reasonably available control measures
RACT: reasonably available control technology
RFP: reasonable further progress
ROP: rate of progress
SC: South Coast
SED: Southeast Desert
SIP: state implementation plan
SJV: San Joaquin Valley
SJVAPCD/SJVUAPCD: San Joaquin Valley (Unified) Air Pollution Control District
tpd: tons per day
TSD: technical support document
VOC: volatile organic compounds

I. Summary and Background Information

This document provides supporting information and analysis for EPA's approval of revisions to the provisions of California state implementation plan (SIP) for controlling volatile organic compounds (VOC) from pesticide usage in five California ozone nonattainment areas: South Coast, Southeast Desert (SED), Ventura County, San Joaquin Valley (SJV), and Sacramento Metro. These provisions are referred to collectively as the California SIP Pesticide Element. EPA proposed this approval on April 24, 2012 at 77 FR 24441.

A. Submitted Revisions to the California SIP Pesticide Element

EPA is approving the following submittals made by the California Air Resources Board (CARB) as revisions to the California SIP:

1. October 12, 2009 submittal of regulations adopted by the California Department of Pesticide Regulation (CDPR):[1]

- Title 3 California Code of Regulations (3 CCR), sections 6447 (first paragraph) and 6447.3-6452 pertaining to field fumigation methods;
- Portions of 3 CCR sections 6452.1 and 6452.4 and sections 6624 and 6626 pertaining to emissions inventory;
- 3 CCR sections 6452.2 and 6452.3 pertaining to field fumigation limits and allowances in the Ventura County ozone nonattainment area.[2]

2. October 12, 2009 submittal of a revised SIP Commitment for the San Joaquin Valley,[3] adopted by CDPR director on April 17, 2009. This submittal limits VOC emissions from the use of agricultural and commercial structural pesticides in the SJV to 18.1 tpd and commits CDPR to implement restrictions on non-fumigant pesticides in the SJV by 2014.

[1] As part of this submittal, CARB withdrew its January 28, 2008 submittal of an earlier version of the field fumigant regulations. See letter, James N. Goldstene, Executive Officer, CARB to Laura Yoshii, Acting Regional Administrator, EPA Region 9, October 12, 2009 and State of California, Air Resources Board, Executive Order S-09-011 Relating to Approval of Regulations to Achieve Pesticide Volatile Organic Compound Emission Reductions, October 12, 2009.

[2] CARB did not submit for inclusion into the SIP those portions of 3 CCR sections 6452.2 and 6452.3 pertaining to field fumigation limits and allowances in the South Coast, SED, SJV, and Sacramento Metro ozone nonattainment areas.

[3] As part of this submittal, CARB withdrew the SIP commitment for the SJV that was included on page 131 of the CARB's Proposed State Strategy for California's 2007 State Implementation Plan (as adopted September 27, 2007) ("2007 State Strategy") that it submitted on November 15, 2007. See letter, James N. Goldstene, Executive Officer, CARB to Laura Yoshii, Acting Regional Administrator, EPA Region 9, October 12, 2009 and State of California, Air Resources Board, Executive Order S-09-005 Relating to Approval of Amendments to the 2007 Ozone Plan for the San Joaquin Valley to Achieve Pesticide Emission Reductions, October 12, 2009.

3. August 2, 2011 submittal of revisions to CDPR regulations.[4] This submittal revised and added to the October 12, 2009 submittal, and included the following:[5]

- 3 CCR sections 6448.1, 6449.1, and 6450.1 pertaining to fumigation method restrictions.
- Portions of 3 CCR sections 6452.2 and 6452.3 pertaining to field fumigation limits and allowances in the Ventura County ozone nonattainment area.
- 3 CCR section 6452.4 pertaining to the annual VOC emissions inventory report.
- 3 CCR section 6626 pertaining to pesticide use reports.

1. CDPR Regulations

The submitted CDPR regulations can be divided into four distinct but related parts. The first part (revisions to 3 CCR sections 6447 through 6452) establishes standards for fumigant application and restricts the use of certain higher-emitting application methods in the five nonattainment areas between May 1 and October 31 of each year. The second part (3 CCR sections 6452.2 and 6452.3) provides a contingency mechanism to limit VOC emissions from field fumigant applications in the Ventura County nonattainment area to ensure that the area's overall limit on pesticide VOC emission limit is not exceeded. The third part (3 CCR section 6452.4) requires CDPR to annually report on pesticide VOC emissions in each of the five nonattainment areas and establishes requirements for the report. The fourth part (3 CCR sections 6624 and 6626) establishes the recordkeeping and reporting requirements necessary to ensure compliance with the other parts. EPA describes each part in more detail below.

The first part of the submitted regulations establishes, by fumigant and method, requirements for the field application of seven fumigants and restricts to the lowest-emitting ones, the methods that may be used to apply field fumigants in the in the South Coast, SED, Ventura County, SJV, and Sacramento Metro ozone nonattainment areas during the period May 1 to October 31. Requirements are described for the field fumigants: methyl bromide (sections 6447 and 6447.3); 1,3-dichloropropene (sections 6448 and 6448.1); chloropicrin (sections 6449 and 6449.1); metam-sodium, potassium N-methyldithiocarbamate and dazomet (sections 6450, 6450.1 and 6450.2); and sodium tetrathiocarbonate (sections 6451 and 6451.1).

Specific requirements for applying these fumigants include, for example, limiting fumigant application rates (pounds/acre); specifying application methods (e.g., minimum injection depth below soil surface, number of water treatments, minimum hours to leave tarpaulin in place); and requiring plans to address damaged tarpaulins). 3 CCR section 6452

[4] See letter, James N. Goldstene, Executive Officer, CARB to Jared Blumenfeld, Regional Administrator, EPA Region 9, August 2, 2011 and State of California, Air Resources Board, Executive Order S-11-015, Relating to Approval of Regulations to Achieve Pesticide Volatile Organic Compound Emission Reductions, August 2, 2011.

[5] CARB also submitted 3 CCR section 6400 (Restricted Materials), section 6446 (Methyl Iodide Field – General Requirements) and section 6446.1 (Methyl Iodide Field Fumigation Methods) and related portions of provisions section 6452.2 (a)(4) (Annual Volatile Organic Compound Emissions Inventory Report) and section 6624 (f) (Pesticide Use Records). EPA is deferring action on these provisions due to California's cancellation, effective March 21, 2012, of the registration of all products containing the active ingredient methyl iodide. CDPR adopted this set of methyl iodide-related regulations on May 11, 2011, after and separately from its April 7, 2011 regulations that are also included in CARB's August 2, 2011 submittal.

allows CDPR to approve alternative fumigation methods under certain conditions and based on specific criteria.

As submitted, the second part of the regulations applies only to the Ventura County ozone nonattainment area. This part requires CDPR to set a field fumigant VOC emission limit for Ventura County in its annual VOC emissions inventory report if overall pesticide emissions (not just fumigant emissions) in the Ventura County nonattainment area are found to be within 5 percent of or exceed the listed benchmark. The benchmark is equivalent to the 20 percent reduction in pesticide VOC emissions from 1990 emissions levels that is required in the area by the California SIP Pesticide Element. This part further requires that the county agricultural commissioner add conditions to field fumigation permits or other take other actions that will prevent the field fumigant limit from being exceeded.

The third part of the submitted regulations requires that CDPR to issue an annual emissions inventory report which reports the total agricultural and commercial structural (fumigant and nonfumigant) pesticide VOC emissions for the previous years in each of the five nonattainment areas and evaluates compliance with the emissions reduction limits in each area. These regulations specify the method for calculating emissions and require that CDPR make a draft emissions inventory available to the public for 45-day comment period and post the final report on its website.

The fourth part of the submitted regulations establish the pesticide use recordkeeping and reporting requirements needed to assure compliance with the other parts. This part requires anyone using pesticides in specific applications to maintain certain records for two years and requires operators of property which produce an agricultural commodity and agricultural pest control businesses to report the use of pesticides to the county agricultural commissioner. These regulations require the recording and reporting of the method for fumigant application in the five nonattainment areas.

2. CDPR's *Revised SIP Commitment for the San Joaquin Valley*

CDPR has revised its previous commitments to limit VOC emissions from commercial structural and pesticides in the SJV. Specifically, it is now committing to

- use the specified emissions estimation methodology[6] to establish the 1990 pesticide VOC emission levels and evaluate compliance with the provisions in the 1994 Pesticide Element for SJV;
- implement restrictions on agricultural fumigation methods and by 2014 implement restrictions on VOC emissions of non-fumigant pesticides; and
- manage VOC emissions from agricultural and commercial structural pesticide use to ensure that they do not exceed 18.1 tons-per-day in the SJV area (which is equivalent to a 12 percent reduction in pesticide VOC emissions from 1990 levels).

[6] For tracking compliance with the overall VOC limit in the SJV, CDPR proposes to use the emissions estimation methodology described on page 2-4 (in the section "Procedure for Calculating Unadjusted and Adjusted Volatile Organic Compound Emissions) of the November 5, 2008 memorandum from Rosemary Neal, CDPR to Randy Segawa, CDPR, Subject: Update to the Pesticide Volatile Organic Inventory. Estimated Emissions 1990-2006, and Preliminary Estimates for 2007" ("Neal memorandum").

B. Currently-Approved Provisions of the California SIP Pesticide Element

Prior to today's action, EPA has taken three actions to either approve or revise provisions of the California SIP Pesticide Element. EPA briefly describes each action below and discusses each action and its background in more detail in section I.E. of this TSD.

- *1994 Pesticide Element* –The 1994 Pesticide Element was submitted by California in November 1994 as part of the State's comprehensive 1-hour ozone attainment plan and included, among other things, a commitment by CDPR to reduce VOC emissions from agricultural and structural pesticide emissions in five ozone nonattainment areas by a maximum of 20 percent from 1990 baseline levels. EPA approved the 1994 Pesticide Element on January 8, 1997 (62 FR 1150) and codified it at 40 CFR § 52.220(c)(204)(i)(A)(6) and § 52.220(c)(236).[7]
- *PEST-1 Measure in CARB's 2003 State Strategy* – In 2003, CARB updated the statewide strategy that was part of the 1994 Ozone SIP. One of the measures in the 2003 State Strategy was PEST-1 ("Implement Existing Pesticide Strategy"), which retained the provisions of the 1994 Pesticide Element. EPA approved PEST-1 into the SIP as part of its action to approve in part and disapprove in part the 2003 South Coast Air Quality Management Plan (AQMP). See 74 FR 10176 (March 10, 2009), codified at 40 CFR § 52.220(c)(339)(ii)(A)(*1*).[8]

[7] In 2004, litigation was brought against CDPR in federal district court to enforce the 1994 Pesticide Element. In 2006, the District court ordered the Department to adopt, implement regulations to achieve the emissions reduction goals as set forth in the May 9, 1995 memorandum from James Wells to James Boyd ("Wells memorandum"). See *El Comité Para el Bienestar de Earlimart* v. *Helliker,* 416 F. Supp. 2d 912 [E.D. Cal. 2006]. In its review of District court's decision and order, the 9th Circuit Court of Appeals determined that the Wells memorandum relied on by El Comité and the subsequently by the District court in its decision was not included in the SIP and vacated the District court's order. See *El Comité para el Bienestar de Earlimart* v. *Warmerdam*, 539 F.3d 1062, 1069-1072 (*Warmerdam*).

[8] As part of its decision in *Association of Irritated Residents* v. *EPA*, No. 09-71383, the 9th Circuit Court of Appeals determined that EPA had erred in approving the PEST-1 measure without first evaluating the approved 1994 Pesticide Element, particularly as to whether the Element had sufficient enforcement mechanisms to satisfy the requirements of the CAA. In the April 24, 2012 proposal, EPA provided its preliminary response to the remand by the Ninth Circuit Court of Appeals in *Association of Irritated Residents*. This remand required EPA to evaluate the California SIP Pesticide Element for enforceability under the CAA. See 77 FR 24441, 24447. In this action, we are finalizing that response without change.

In the proposed rule, we also referred to another Ninth Circuit petition for review, *El Comité Para El Bienestar De Earlimart v. EPA* (No. 08-74340) ("*El Comité")*. 77 FR 24441 at 24448. In *El Comité*, various environmental and community groups challenged EPA's 1997 approval (62 FR 1150, Jan. 8, 1997) of the 1994 SIP for the 1-hour ozone standard for various California nonattainment areas ("1994 California Ozone SIP"), which included approval of the California SIP Pesticide Element, on the basis of the same 2008 Ninth Circuit decision, *El Comité Para El Bienestar De Earlimart v. Warmerdam*, 539 F.3d 1062) ("*Warmerdam*"), that was the basis for the remand in *Association of Irritated Residents*. At the time of our proposed rule, the Ninth Circuit had not issued its decision in *El Comité*. Since then, the Ninth Circuit has issued a remand order to EPA in *El Comité* to reconsider its approval of the 1994 California Ozone SIP in light of the *Warmerdam* decision, as required by the remand in *Association of Irritated Residents*.[8] The remands in both *Association of Irritated Residents* and *El Comité* necessitate the same evaluation (i.e., for CAA enforceability) for the same portion of the California SIP (i.e., the California SIP Pesticide Element). Thus, our decision not to rescind or amend our 2009 re-approval of the California SIP Pesticide Element, in light of our approval of CDPR's revised SIP commitment for the SJV and fumigant regulations,

- *2007 Ventura County Pesticide Element* – In 2007, CARB submitted a revision to the 1994 Pesticide Element that reduced in part and temporally the emissions reduction commitments in Ventura County. EPA approved this revision in 2008. See 73 FR 41277 (July 18, 2008), codified at 40 CFR § 52.220(c)(355)(i)(A)(*1*).

C. Areas Affected by the Revisions to the California SIP Pesticide Element

The field fumigant regulations pertaining to restricted materials and fumigation methods restrictions (3 CCR sections 6447.3, 6448.1, 6449.1, 6450.1, 6450.2, 6451.1, 6452), to annual VOC emissions inventory report requirement (3 CCR section 6452.4); and to the pesticide use reports requirements (3 CCR sections 6452.1, 6624 and 6626) apply to the following five California ozone nonattainment areas: [9]

South Coast	• Orange County • Los Angeles County (part) • Riverside County (part) • San Bernardino County (part)
Southeast Desert (SED)	• Riverside County (Coachella Valley portion) • San Bernardino County (part) • Los Angeles County (Lancaster/Palmdale)
Ventura County	• Ventura County
San Joaquin Valley	• San Joaquin County • Stanislaus County • Merced County • Madera County • Fresno County • Tulare County • Kings County • Kern County (valley portion)
Sacramento Metro	• Sacramento County • Yolo County

finalizes not only our response to the remand in *Association of Irritated Residents*, but it also finalizes our response to the remand in *El Comité*.

[9] CDPR's regulations establishing the parameters for field fumigant application methods (but not the restrictions on which methods may be used during certain periods of the year) and pesticide use recordkeeping and reporting requirements apply statewide; however, EPA is limiting its approval of these provisions to just the five listed nonattainment areas.

- El Dorado County (part)
- Placer County (part)
- Solano County (part)
- Sutter County (part)

The provisions in 3 CCR sections 6452.2 and 6452.3 which pertain to field fumigation limits and allowances as submitted are only applicable to the Ventura County ozone nonattainment area.

The revised SIP commitment for the SJV applies solely to the San Joaquin Valley 1-hour ozone nonattainment area, as described above.

In Table 1 below, EPA lists the current attainment status for the national ambient air quality standards for ozone and particulate matter of the five areas that are affected by the revisions to the California SIP Pesticide Element. EPA also lists the current status of each area's ozone and (if applicable) particulate matter plans. It provides information for both the ozone and particulate matter standards because VOC emissions are considered precursors emissions for both pollutants; however, we note that not all areas are required to control VOC for particulate matter attainment.

The applicable standards are:

1-hour ozone standard	• 0.12 parts per million (ppm) • 40 CFR § 50.9 • *Revoked, effective June 15, 2005; 69 FR 23951 (April 30, 2004)*
1997 8-hour ozone standard	• 0.08 ppm • 40 CFR § 50.10 • 62 FR 38894 (July 18, 1997)
2008 8-hour ozone standard	• 0.075 ppm • 40 CFR § 50.15 • 73 FR 16511 (March, 27, 2008)
1997 $PM_{2.5}$ standards	• 15.0 micrograms per cubic meter ($\mu g/m^3$) annual arithmetic mean and • 65 µg/m3 24-hour average • 40 CFR § 50.7 • 62 FR 38711 (July 18, 1997)
2006 $PM_{2.5}$ standards	• 15.0 micrograms per cubic meter (µg/m3) annual arithmetic mean concentration, and • 35 $\mu g/m^3$ 24-hour average concentration

	• 40 CFR §50.13 • 71 FR 61224 (October 17, 2006)
PM-10 standard	• 150 (μg/m3) 24-hour average concentration • 40 CFR § 50.6 • 52 FR 24663 (July 1, 1987) as amended at 62 FR 38711 (July 18, 1997), 65 FR 80779 (December 22, 2000) and 71 FR 61224 (October 17, 2006)

TABLE 1 - ATTAINMENT AND PLAN STATUS OF AREAS SUBJECT TO THE PESTICIDE ELEMENT OZONE AND PARTICULATE MATTER NAAQS

STANDARD	1-HOUR OZONE		8-HOUR OZONE		PARTICULATE MATTER	
AREA	ATTAINMENT STATUS	PLAN STATUS	ATTAINMENT STATUS	PLAN STATUS	ATTAINMENT STATUS	PLAN STATUS
South Coast	Nonattainment/ Finding of failure to attainment	Approved	Nonattainment/ extreme	Approved	1997: Nonattainment	1997: Approved
			2008: Nonattainment	N/A	2006: Nonattainment	2006: Due December 14, 2012
					PM_{10}: Redesignation to attainment requested	PM_{10}: Approved
Southeast Desert	Nonattainment/ Finding of failure to attainment	Approved	Nonattainment/ pending severe classification per State's request	Pending action	1997: Attainment/ unclassifiable	1997: N/A
			2008: Nonattainment	N/A	2006: Attainment/ unclassifiable	2006: N/A
					PM_{10}: Redesignation to attainment requested (Coachella Valley)	PM_{10}: Approved (Coachella Valley)
Ventura County	Nonattainment/ Finding of attainment	Approved	Nonattainment/ severe	Pending action	1997: Attainment/ unclassifiable	1997: N/A
			2008: proposed Nonattainment	N/A	2006: Attainment/ unclassifiable	2006: N/A
San Joaquin Valley	Nonattainment/ Finding of failure to attainment	Approved	Nonattainment/ extreme	Approved	1997 $PM_{2.5}$: Nonattainment	1997 $PM_{2.5}$: Approved
			2008: Nonattainment	N/A	2006 $PM_{2.5}$: Nonattainment	2006 $PM_{2.5}$: Due December 14, 2012
					PM_{10}: attainment	PM_{10}: Approved

TABLE 1 - ATTAINMENT AND PLAN STATUS OF AREAS SUBJECT TO THE PESTICIDE ELEMENT OZONE AND PARTICULATE MATTER NAAQS

STANDARD	1-HOUR OZONE		8-HOUR OZONE		PARTICULATE MATTER	
AREA	ATTAINMENT STATUS	PLAN STATUS	ATTAINMENT STATUS	PLAN STATUS	ATTAINMENT STATUS	PLAN STATUS
Sacramento Metro	Nonattainment/ Finding of attainment	Approved	1997: Nonattainment/ severe	Pending action	1997: Attainment/ unclassifiable	1997 $PM_{2.5}$: N/A
			2008: Nonattainment	N/A	2006: Nonattainment	2006 $PM_{2.5}$: Due December 14, 2012
					PM_{10}: redesignation to attainment requested	PM_{10}: pending action

D. Pesticide Emissions Inventory

As required by 3 CCR section 6452.4(a), CDPR annually reports on VOC emissions from agricultural and commercial structural pesticide applications in the five areas subject to the provisions of the California SIP Pesticide SIP. The most recent report, with emissions estimates for 1990 and 2004 through 2010, was issued on March 29, 2012 and revised on June 17, 2012.[10] Table 2 shows the estimates of VOC emissions from pesticides in each area as well as the SIP target level from this report. The inventory represents daily average emissions for period May 1 and October 31 of each year. Table 3 compares current estimated emissions from pesticides in each area to total VOC emissions from all sources in the area.

TABLE 2 – ADJUSTED VOC EMISSIONS FROM PESTICIDES
TARGET LEVEL AND EMISSIONS IN 1990 AND 2004-2010
TONS PER AVERAGE DAY MAY 1-OCTOBER 31

	1990	**GOAL**	2004	2005	2006	2007	2008	2009	2010
SJV	20.5	**18.1**	17.3	20.7	21.3	17.1	14.5	13.2	15.5
Ventura	3.8	**3.0**	3.9	3.6	3.7	3.4	1.7	2.1	2.6
South Coast	10.8	**8.7**	1.9	2.0	1.5	1.5	1.3	1.2	1.7
SED	1.2	**0.9**	1.0	0.7	0.6	0.8	0.3	0.3	0.5
Sacramento Metro	2.8	**2.2**	1.2	1.2	1.4	1.0	0.9	0.9	1.0

Source: Revised 2010 Pesticide VOC Emissions Report, Table 5, p. 20.

[10] Rosemary Neal, Ph.D., Frank Spurlock, Ph. D., and Randy Segawa, California Department of Pesticide Regulation, "Annual Report on Volatile Organic Compound Emissions from Pesticides: Emissions For 1990 – 2010," March 29, 2012 ("2010 Pesticide VOC Emissions Report") and Rosemary Neal, Ph.D., Frank Spurlock, Ph. D., and Randy Segawa, California Department of Pesticide Regulation, "Annual Report on Volatile Organic Compound Emissions from Pesticides: Emissions For 1990 – 2010," Revised, June, 2012 ("Revised 2010 Pesticide VOC Emissions Report").

TABLE 3 - PESTICIDE EMISSIONS AS PERCENT OF OVERALL VOC EMISSIONS

	2010 PESTICIDE VOC EMISSIONS TONS PER SUMMER DAY	TOTAL 2011 VOC INVENTORY TONS PER SUMMER DAY	PESTICIDE AS PERCENT OF TOTAL VOC EMISSIONS
SJV	16.8	354	4.7%
Ventura	2.6	48.3	5.3%
South Coast	1.2	580	0.2%
SED	0.5	88.1	0.6%
Sacramento Metro	1.1	121	0.9%

Source: Total 2011 VOC inventory for SJV and SC: CARB, 8-Hour Ozone State Implementation Plan Revisions for the South Coast and San Joaquin Valley Air Basins, July 21, 2011, Appendix B. Total 2011 VOC inventory for Ventura County, SED, and Sacramento Metro: 2007 State Strategy, Appendix A.

CDPR Procedures for Calculating VOC Emissions from Pesticides

Section 3 CCR section 6452.4(a)(1) as amended in May 2011 establishes the basic procedures for calculating pesticide VOC emissions for the annual report and thus for determining compliance with the SIP pesticide reduction goals:

> (1) report the total agricultural and structural (fumigant and nonfumigant) pesticide volatile organic compound (VOC) emissions for the previous years. Nonfumigant pesticide product emissions will be the summation of the pounds of each pesticide product used multiplied by the VOC content (emission potential) for the specific product. Fumigant product emissions will be the summation of the pounds of each pesticide product used multiplied by the emission potential for that specific product and VOC emission rating for the application method, as specified in (5).[11]

The emission potential (EP) of a pesticide product is the fraction of the product that is assumed to contribute to atmospheric VOC. The procedure that CPDR uses to determine EP is documented in the memorandum, Frank Spurlock, CDPR to John Sanders, CDPR, January 7, 2002, subject: Methodology for determining VOC emission potential of pesticide products (http://www.cdpr.ca.gov/docs/emon/vocs/vocproj/intro.pdf). The VOC emission ratings for the fumigant application methods (the application method adjustment factor (AMAF)) are established in the annual report and based on available scientific data documenting the VOC emissions. See 3 CCR section 6452.4(a)(4) and Revised 2010 Pesticide VOC Emissions Report, p. 14 and Appendix 1a.

In its revised SIP commitment for the SJV, CDPR proposes to track compliance with the overall VOC limit in the SJV by using the emissions estimation methodology described on page 2-4 (in the section "Procedure for Calculating Unadjusted and Adjusted Volatile Organic Compound Emissions) in the memorandum, Rosemary Neal, CDPR to Randy Segawa, CDPR,

[11] Subsection (5) of 3 CCR 6452.4(a) was renumbered to (4) in the May 2011 revisions to this section.

November 5, 2008, Subject: Update to the Pesticide Volatile Organic Inventory. Estimated Emissions 1990-2006, and Preliminary Estimates for 2007 ("Neal memorandum").[12] The emission calculation procedures in 3 CCR section 6452.4(a)(1) and the Neal memorandum are essentially the same and follow standard inventorying practice. See, for example, http://www.epa.gov/ttn/chief/ap42/index.html.

EPA interprets CDPR's regulations in CCR section 6452.4(a) and commitment to use the emissions estimation methodology in the Neal memorandum to calculate base year VOC emission levels and compliance to replace the calculation methodology in the 1994 Pesticide Element.

E. History of the California SIP Pesticide Element

Prior to the submittals that are the subject to this final action, California has made five submittals and EPA has taken three rulemaking actions related to the California SIP Pesticide Element. These submittals and actions are listed below in Table 4. In this section, EPA provides a summary of the submittals and its actions on them in order to place this final action in context.

TABLE 4 – PREVIOUS SUBMITTALS AND ACTIONS ON THE CALIFORNIA SIP PESTICIDE ELEMENT

DATE	SUBMITTAL/ACTION
November 15, 1994	California submits "The State Implementation Plan for Agricultural and Commercial Structural Pesticides," November 15, 1994 as part of the *1994 California State Implementation Plan for Ozone* ("1994 Pesticide SIP")
May 11, 1995	California submits the memorandum, James W. Wells, Director, CDPR to James D. Boyd, Executive Officer, CARB, May 9, 1995, re: 1994 State Implementation Plan ("Wells memorandum") which clarifies and revises certain aspects of the 1994 Pesticide SIP document.
March 18, 1996	EPA proposes to approve 1994 Ozone SIP including the pesticide measure. 61 FR 10920.
June 13, 1996	California submits additional information including emissions reductions credit taken for the pesticide measure. See, letter, James D. Boyd, Executive Officer, CARB to David Howekamp, Air Division Director, EPA Region 9, June 13, 1996 ("Boyd/Howekamp letter").
January 8, 1997	EPA finalizes approval of the 1994 Ozone SIP including the 1994 Pesticide Element. 62 FR 1150.

[12] The Neal memorandum was included as part of October 12, 2009 submittal of the revised SIP commitment for the SJV, and EPA has included it as additional material in the California SIP.

TABLE 4 – PREVIOUS SUBMITTALS AND ACTIONS ON THE CALIFORNIA SIP PESTICIDE ELEMENT

DATE	SUBMITTAL/ACTION
January 9, 2004	California submits the 2003 State Strategy which includes the PEST-1 measure. PEST-1 continues implementation of the 1994 Pesticide Element.
November 30, 2007	California submits revisions to the Pesticide Element for Ventura County.
April 23, 2008	EPA proposes to approve the revisions to the Pesticide Element for Ventura County. 73 FR 21885.
July 18, 2008	EPA finalizes approval of the revisions to the Pesticide Element for Ventura County. 73 FR 41277.
March 10, 2009	EPA proposes to approve portions of the 2003 State Strategy including the PEST-1 measure. 74 FR 10176.
March 8, 2010	EPA finalizes approval of portions of the 2003 State Strategy including the PEST-1 measure. 75 FR 10420.
April 24, 2012	EPA proposes to approve the revised SIP commitment for the SJV and CDPR's fumigant regulations. 77 FR 24441.

1. The 1994 Pesticide Element in the 1994 Ozone SIP[13]

On November 15, 1994, California submitted a comprehensive SIP to attain the 1-hour ozone standard in the State. As part of this comprehensive SIP, the State included a plan to reduce VOC emissions from agricultural and commercial structural pesticide applications in five California ozone nonattainment areas by a maximum of 20 percent from 1990 baseline emissions by 2005.[14] Under this plan, known as the 1994 Pesticide SIP, the reductions in VOC emissions were to occur on a linear basis from the 1990 baseline emissions inventory. The plan also offered the flexibility to achieve reductions of less than 20 percent by the year 2005 in air districts if less pesticidal VOC emissions reductions were needed. See 1994 Pesticide SIP, p. 1. The 1994 Pesticide SIP was to be implemented in several steps: 1) re-evaluation of pesticide products; 2) establishment of a 1990 pesticidal VOC base year inventory and emissions tracking program; and 3) development of a program to reduce pesticide VOC emissions if necessary.

The first step of the 1994 Pesticide SIP "Re-evaluation of Pesticide Products" was designed to determine the amount of VOC in each pesticide product by requiring registrants of

[13] EPA starts this history with California's first submittal of a pesticide measure for *SIP* approval. This submittal, however, was preceded by an EPA proposal to regulate pesticide VOC emissions statewide as part of a federal implementation plan (FIP) for the South Coast, Ventura, and Sacramento Metro 1-hour ozone nonattainment areas. See 59 FR 23263, 23320 (May 5, 1994). This FIP never went into effect.

[14] "The State Implementation Plan for Agricultural and Commercial Structural Pesticides," November 15, 1994.

agricultural and structural pesticides to submit data on the VOC Emission Factor of their products. This step was begun in April 1994.

The second step of the 1994 Pesticide SIP "Establishing the 1990 Base Year Inventory and Tracking" included using the 1991 Pesticide Use Report and then adjusting it to 1990. The 1991 PUR were proposed to be used instead of the 1990 because they were then believed to be more accurate than the 1990 PUR reports. The SIP outlined the methodology that would be used to develop the baseline inventory and stated that this methodology would be used for subsequent years.

The third step of the 1994 Pesticide SIP "Reducing Pesticide VOC Emissions" included analysis of the 1990 and subsequent annual emissions inventories to develop detailed pesticidal VOC emissions inventories over time, encouraging reductions in pesticidal VOC emissions through a series of non-regulatory steps, and development of regulatory measures as necessary to ensure that reductions in pesticidal VOC were achieved. The decision whether additional regulatory measures were needed was to be made by 1997.

After reviewing the initial submittal, EPA requested CDPR clarify and revise certain aspects of the 1994 Pesticide SIP including to identify the percent reductions in emissions expected in specific years for each nonattainment area and the date by which CDPR would adopt any additional regulations that might be needed to achieve those reductions.[15] California responded with the requested clarifications and revisions.[16] These revisions including a commitment from California to adopt and submit to EPA by June 15, 1997 any regulations necessary to reduce VOC emissions from agricultural and commercial pesticides by specific percentages of the 1990 base year emissions, by specific years in five nonattainment areas. CDPR listed these percentage reductions in a table:

REDUCTIONS FROM 1990 BASELINE

Ozone nonattainment area	1996	1999	2002	2005
Sacramento Metro	8%	12%	16%	20%
San Joaquin Valley	8%	12%	16%	20%
South Coast	8%	12%	16%	20%
Southeast Desert	8%	12%	16%	20%
Ventura	8%	12%	16%	20%

Source: Wells memorandum, p. 1.

EPA proposed to approve the 1994 California Ozone SIP on March 18, 1996 (61 FR 10920, 10935). In its proposal, EPA stated in regard to the pesticides measure:

[15] See letters, David P. Howekamp, EPA to James W. Wells, Director, California Department of Pesticide Regulation, March 20, 1995 and April 21, 1995.

[16] See letter, James W. Wells to David P. Howekamp, March 31, 1995 and letter, James D. Boyd to Felicia Marcus, Regional Administrator, EPA Region 9, May 11, 1995 transmitting memorandum, James W. Wells, Director, CDPR to James D. Boyd, Executive Officer, CARB, May 9, 1995, re: 1994 State Implementation Plan ("Wells memorandum").

4. Pesticides

a. Review of Measure. California's 1994 SIP submittal includes a commitment to reduce VOC emissions from the application of agricultural and structural pesticides. The submittal describes relevant authority in Section 6220 of Title 3 of the California Code of Regulations that has been granted to the California Department of Pesticide Regulation (DPR). However, since CARB has overall responsibility for developing the SIP, California's pesticide commitment is described in a letter from DPR to CARB, (Ftn. 4: James Wells (DPR) to James Boyd (CARB), dated November 15, 1994) which CARB then submitted to EPA with the balance of the 1994 SIP. In May 1995, California used a similar mechanism to clarify technical details of the pesticide commitment. (Ftn. 5: May 9, 1995 letter from Wells to Boyd under a May 11, 1995 cover letter from Boyd to Felicia Marcus (EPA)). This clarification is considered part of California's SIP

b. Emission Reductions. As described in the SIP, California has committed to adopt and submit to U.S. EPA by June 15, 1997, any regulations necessary to reduce VOC emissions from agricultural and commercial structural pesticides by specific percentages of the 1990 base year emissions, (Ftn 6: In a March 31, 1995 letter from Wells to David Howekamp (EPA), California clarified its commitment to limit future VOC emissions from pesticides to the target percentages of the 1990 base year emissions, regardless of future growth in emissions that might otherwise occur. "Therefore, the proposed 20 percent reduction goal could be considered to be greater than 20 percent if one includes growth in pesticidal VOC emissions."(March 31 letter, page 2.) by specific years, and in specific nonattainment areas as listed in the table labeled, "Reductions from 1990 Pesticide Emissions Baselines." The table labeled "Reductions from Pesticides Measure" shows reductions counted toward the ROP milestones and attainment in each area.

REDUCTIONS FROM 1990 PESTICIDE EMISSIONS BASELINE

Ozone nonattainment area	1996 (percent)	1999 (percent)	2002 (percent)	2005 (percent)
Sacramento Metro	8	12	16	20
San Joaquin Valley	8	12	16	20
South Coast	8	12	16	20
Southeast Desert	8	12	16	20
Ventura	8	12	16	20

REDUCTIONS FROM PESTICIDES MEASURE

(Tons per day of ROG)

	1999 (	2002	2005	2007	2008	2010
South Coast	1.5	1.6	1.3		1.6	1.7
Southeast Desert	0	0	1.2	1.5		
Ventura	0	0	2.4			
Sacramento Metro	0	0	2.7			
San Joaquin Valley	13					
San Diego	0.2					

> The pesticide component of California's SIP also describes education and outreach programs intended to achieve these emission reductions voluntarily. EPA strongly encourages these programs, and hopes to work with DPR and the affected industries to make them successful. In the event, however, that additional control strategies are needed, California's commitment to adopt and submit any necessary pesticide regulations is sufficient to ensure those emission reductions described in the table labeled, ''Reductions from 1990 Pesticide Emissions Baselines." (Ftn 7: Note that for purposes of ROP and attainment demonstrations in the SIPs, California has not claimed emission reduction credit for the 8% pesticide emission reductions planned for 1996.)
>
> c. EPA Action. EPA is proposing to approve the Pesticides measure under sections 110(k)(3) and 301(a) of the Act, and assign credit to the measure as part of the [rate of progress] and attainment demonstrations for appropriate nonattainment areas. EPA will take regulatory action on the State's Pesticides regulations, if any regulations are required and are submitted, in separate rulemakings.

In its May 2, 1996 comment letter on the proposed approval, California stated that it took SIP credit for pesticide reductions only in the applicable attainment year for the San Joaquin Valley, Sacramento Metro, Ventura County, the Southeast Desert and the South Coast and that EPA's action "should reflect this information."[17] CARB subsequently submitted additional details in the Boyd Letter that were intended to supplement the technical corrections identified in the State's formal May 2 comment letter.[18]

On the specific proposal to approve the pesticide provisions of the 1994 Ozone SIP, CARB requested that that EPA delete the table showing the reductions from the 1990 Pesticide Emissions Baseline table, stating that the commitment is for 20 percent reduction from 1990 levels in each SIP area, except SD and that CARB only took credit in the attainment year, giving these years and percent values as SJV 1999 = 12%; Sac 2005 = 20%; Ven 2005 – 20%, SED 2007 – 20%; and SC 2010 = 20%.[19] *Id.* CARB also requested that no credit be assigned the pesticide measure prior to attainment. *Id.* Finally, CARB provided specific emissions reduction credits from the Pesticide Element for each area in their attainment year. *Id.*, Attachment C. EPA listed these credit (which are all expressed in the 1994 SIP currency[20]) in its final rule approving

[17] Letter, James M. Strock, Secretary for Environmental Protection, to Felicia Marcus, Regional Administrator, EPA Region 9, May 2, 1996, Attachment 1, p. A-3.

[18] See letter, James D. Boyd, Executive Officer, CARB to David Howekamp, Air Division Director, EPA Region 9, June 13, 1996, Attachment A, p. A-2 and Attachment C.

[19] These dates corresponded to the applicable attainment date for each area's then-current classification for the 1-hour ozone standard: SJV was classified as serious with an attainment date of November 15, 1999; Ventura and Sacramento Metro were classified as severe-15 with an attainment date of November 15, 2005; SED was classified as severe-17 with an attainment date of November 15, 2007, and the South Coast was classified as extreme with an attainment date of November 15, 2010. See 61 FR 10920, 10925.

[20] A SIP's "currency" is the emissions inventory on which it is based. An emissions reduction expressed in a particular "SIP currency" is an emissions reduction calculated using the inventory included in that particular SIP. Because inventories vary from SIP to SIP for reasons unrelated to controls (e.g., improved activity estimates or emissions factors), the estimated emissions reductions from a control measure in tons per day can change from SIP to SIP even if the effectiveness of the control measure as a percentage of the emissions category does not change.

the 1994 Ozone SIP in the table entitled "REDUCTIONS FROM PESTICIDES MEASURE" at 62 FR 1150, 1170 (January 8, 1997). In that final rule, EPA provided the following discussion on the 1994 Pesticide Element:

> 4. Pesticides
>
> *a. Review of Measure.* California's 1994 SIP submittal includes a commitment to reduce VOC emissions from the application of agricultural and structural pesticides. The submittal describes relevant authority in Section 6220 of Title 3 of the California Code of Regulations that has been granted to the California Department of Pesticide Regulation (DPR).
>
> *b. Response to Comments.* The Environmental Defense Center (EDC) questioned whether the pesticides measure should be granted credit. EDC stated that pest management research alone will not create any reductions and the SIP is entirely vague as to how these air quality benefits will be accomplished. While the NPRM refers to a June 1997 date for promulgation of regulations should the voluntary measures fail, the SIP itself recites a possible, not obligatory, 1998 date.
>
> Finally, EDC recommends that the rule that was included in EPA's 1995 Federal Implementation Plan (or some comparable rule) must be included in the SIP.
>
> On May 11, 1995, CARB submitted a clarification by the California Department of Pesticide Regulation (Memo from James W. Wells to James D. Boyd) to the pesticide element of the SIP, submitted on November 15, 1994. This SIP clarification, which was cited in the NPRM, states, in part, that "The Department of Pesticide Regulation commits to adopt and submit to U.S. EPA by June 15, 1997, any regulations necessary to reduce volatile organic compound emissions from agricultural and commercial structural pesticides by specific percentages of the 1990 base year emissions, by specific years, and in specific nonattainment areas * * * as listed in the following table * * *." California assigns to the pesticides measure less emission reductions than were associated with EPA's proposed FIP rule but the SIP reductions are sufficient to meet progress and attainment requirements in each area for this control category.
>
> *c. Emission Reductions* As described in the SIP, California has committed to adopt and submit to U.S. EPA by June 15, 1997, any regulations necessary to reduce VOC emissions from agricultural and commercial structural pesticides by 20 percent of the 1990 base year emissions in the attainment years for Sacramento Metro, Ventura County, Southeast Desert, and the South Coast, and by 12 percent in 1999 for the San Joaquin Valley. The table labeled "Reductions from Pesticides Measure" shows reductions counted toward attainment in each area. EPA has revised the table to reflect CEPA's request that emission reductions for interim years be excluded from the SIP, since CARB elects not to assign credit to the

Here, the 1994 SIP currency for the pesticide reductions includes, unusually, anticipated growth in pesticide emissions from the base year of 1990 to the applicable attainment year. As a result, to compare whether emissions reductions are equivalent between different SIPs for here, the emissions increases due to growth would need to be removed first.

pesticides measure except for purposes of attainment. If reductions from the measure are, in the future, needed to meet ROP milestones, CARB must resubmit the measure and interim reduction estimates as an SIP revision.

REDUCTIONS FROM PESTICIDES MEASURE

(Tons per day of ROG)

	1999	2002	2005	2007	2008	2010
South Coast	0	0	0	0	0	1.7
Southeast Desert	0	0	0	1.5		
Ventura	0	0	2.4			
Sacrament	0	0	2.7			
San Joaquin Valley	13					

d. EPA Action. EPA is approving the Pesticides measure under sections 110(k)(3) and 301(a) of the Act, and assigning credit to the measure as part of the attainment demonstrations for appropriate nonattainment areas. EPA will take regulatory action on the State's Pesticides regulations, if any regulations are required and are submitted, in separate rulemakings.

Although Wells memorandum was referenced in the preamble to EPA's final approval of the 1994 California Ozone SIP, it was not included in the materials that were incorporated by reference into the California SIP. While EPA's failure to approve and incorporate the Wells memorandum into the SIP may have been inadvertent, California's May 2, 1996 comment letter and the Boyd Letter made such approval and incorporation (i.e., without modification) problematic because the Wells memorandum contained interim year emissions reduction commitments that the California comment letter and Boyd Letter specifically excluded.

2. "PEST -1" Measure in the 2003 State Strategy

On October 23, 2003, CARB adopted the "2003 State and Federal Strategy for the California State Implementation Plan" (adopted October 23, 2003 and submitted January 9, 2004[21]) ("2003 State Strategy"). [22] The 2003 State Strategy identified California's regulatory agenda to reduce ozone and PM_{10} levels. It was submitted to update and replace the State's control measure commitments in the 1994 Ozone SIP (as modified in 1999 for the South Coast).

As submitted, the 2003 State Strategy includes State agency commitments to pursue a set of defined near-term statewide control measures and several emissions reduction commitments specific to attainment of the 1-hour ozone standard and the PM_{10} standards in the South Coast and the PM_{10} standards in the SJV. One of these defined measures was PEST-1 ("Implement Existing Pesticide Strategy"), which retained the provisions of the 1994 Pesticide Element. As

[21] See CARB Board Resolution 03-22 (October 23, 2003) and letter, Catherine Witherspoon, Executive Officer, CARB, to Wayne Nastri, Regional Administrator, EPA Region 9, January 9, 2004.

[22] On February 13, 2008, CARB withdrew from EPA consideration certain commitments related to the South Coast Air Basin in the 2003 State Strategy. These withdrawals did not affect the measure in the 2003 State Strategy related to VOC controls for pesticides. See letter, James N. Goldstene, Executive Officer, CARB to Wayne Nastri, Regional Administrator, EPA Region 9, February 13, 2008.

submitted in January 2004, the 2003 State Strategy only described the measure as it applied to the South Coast. See 2003 State Strategy, section III-C.

In addition to addressing emissions reductions needed for the South Coast 1-hour ozone and SJV PM_{10} plans, the 2003 State Strategy was also intended to provide state strategies and emissions reductions for the SJV's then-under development 1-hour ozone plan. This plan was initially required by the area's reclassification to severe as a result of its failure to attain by its serious attainment date of November 15, 1999 and then required as a result of its voluntary reclassification to extreme. See 66 FR 56476 (November 8, 2001) and 69 FR 20550 (April 16, 2004).

In 2004, CARB submitted the 2004 Extreme [1-hour Ozone] Attainment Plan for the SJV which, as anticipated, relied in part on the 2003 State Strategy for the reductions needed for attainment. On page 27 of its staff report for that plan,[23] CARB discusses the measures in the 2003 State Strategy and provides an interpretation of the PEST-1 measures as it related to the SJV:

- Continuation of the Department of Pesticide Regulation's approved SIP obligation to reduce volatile emissions from pesticides. For the San Joaquin Valley, this means a pesticide VOC emissions target of 12 percent less than 1990 levels.

In 2008, EPA proposed to approve the measures in the 2003 State Strategy including PEST-1 as part of its proposed partially approval/partially disapproval of the 2003 South Coast Air Quality Management Plan. See 73 FR 63408 (October 24, 2008). EPA noted in that proposal that it interpreted its approval of PEST-1 as maintaining the status quo with respect to the existing pesticide strategy, that is, the California SIP would continue to reflect the strategy as approved by EPA in 1997. *Id* at 63413. After reviewing and responding to comments received on the proposal (including comments on the proposed approval of PEST-1e), EPA finalized the approval of the PEST-1 measure. 74 FR 10176 (March 10, 2009). In acting on PEST-1, EPA reasoned that approval or disapproval of PEST-1 amounted to the same thing from the standpoint of the California SIP, namely the 1994 Pesticide Element. See 74 FR 10176 (March 10, 2009).

EPA's approval of PEST-1 was challenged and the Ninth Circuit disagreed with EPA's decision that approval or disapproval of PEST-1 amounted to the same thing and remanded the approval of PEST-1 back to EPA for an evaluation of the Pesticide Element for enforceability. See *Association of Irritated Residents v. EPA*, 632 F.3d 584 (9th Cir. 2011), revised January 27, 2012 (*AIR*). Specifically, the Ninth Circuit held, given its earlier finding in *El Comité para el Bienestar de Earlimart* v. *Warmerdam*, 539 F.3d 1062 (9th Cir. 2008) (*Warmerdam*) that the Wells memorandum was not approved and incorporated into the California SIP, that EPA must determine whether the approved 1994 Pesticide Element has sufficient enforcement mechanisms to satisfy the requirements of the CAA.

3. 2007 Revisions to the Pesticide Element for Ventura County

In 2007, California revised the Pesticide Element for Ventura County to reduce in part, and temporarily, the VOC emissions reduction commitments for Ventura County to avoid short-

[23] CARB, Staff Report, Proposed 2004 State Implementation Plan For Ozone in the San Joaquin Valley, Release Date: September 28, 2004 ("CARB staff report").

term, but potentially significant, economic losses by strawberry farmers in the area and the potential for long-term loss of farmland to urban development. On November 30, 2007, CARB submitted the Proposed Revision to the Pesticide Element of the 1994 Ozone SIP for the Ventura County Nonattainment Area (August 13, 2007)" ("Revised Pesticide Element for Ventura County") to EPA for approval as a revision to the existing Pesticide Element in the California SIP.

Under the 1994 Pesticide Element, CDPR had committed to reduce VOC emissions resulting from agricultural and commercial structural pesticides in Ventura County by 20 percent of the 1990 base year emissions and by 2.4 tpd (in 1994 SIP currency) by 2005. Under the Revised Pesticide Element for Ventura County, CARB proposed to substitute specific "surplus" emissions reductions from California's ongoing mobile source emission control program for a portion of the 1994 Pesticide Element commitment for Ventura County. See Table 3 of the Revised Pesticide Element for Ventura County. Under the Revised Pesticide Element for Ventura County, CARB reduced the amount of the substitution each year until 2012, resulting in the restoration of the full 20 percent reduction and 2.4 tpd VOC commitment under the 1994 Pesticide Element. This phase in resulted in a declining overall limit on pesticide VOC emissions in the Ventura County ozone nonattainment area between 2008 and 2012 as shown below:

PHASE IN OF PESTICIDE VOC LIMITS FOR THE VENTURA OZONE NONATTAINMENT AREA
Tons per Day

2008	2009	2010	2011	2012+
4.3	4.0	3.6	3.3	3.0

After evaluating the revisions for compliance with applicable CAA requirements, EPA approved the Revised Pesticide Element for Ventura County. See 73 FR 21885 (April 23, 2008) (proposed rule) and 73 FR 41277 (July 18, 2008) (final rule).

F. Proposed Action and Comments Received on the Proposed Action

On April 24, 2012, EPA proposed to approve CDPR's revised SIP commitment for the SJV submitted on October 12, 2008 and CDPR's Fumigant Regulations submitted on October 2, 2008 and August 2, 2011. See 77 FR 24441. We provided a 30 day public comment period and received one comment letter. We respond to the comments in this letter in Section III of this TSD.

II. Evaluation of the Revisions to the California SIP Pesticide Element

A. Clean Air Act Procedural Requirements Applicable to SIP Submittals and Revisions.

1. Requirements for Public Notice and Hearing for SIP Submittals

CAA sections 110(a) and (l) require a state to provide reasonable public notice and hearing prior to the adoption and submittal of a SIP or SIP revision. To meet this requirement, every SIP submittal should include evidence that adequate public notice was given and a public hearing was held consistent with EPA's implementing regulations in 40 CFR § 51.102.

CDPR has satisfied applicable statutory and regulatory requirements for reasonable public notice and hearing prior to adoption and submittal (thorough CARB) of its field fumigant regulations and revisions to its revised SIP commitment for San Joaquin Valley. Each SIP submittal contains evidence of adequate public notice and public hearing. See memorandum, Christopher Reardon, Chief Deputy Director, CDPR to James Goldstene, Executive Officer, CARB, October 5, 2009, Subject: Fumigant Volatile Organic Compound Regulations, Enclosures 2 and 3; memorandum, Christopher Reardon, Chief Deputy Director, CDPR to James Goldstene, Executive Officer, CARB, October 5, 2009, Subject: Amendment to the Pesticide Element of the Ozone State Implementation Plan, Enclosures 3 and 4; and memorandum, Christopher Reardon, Chief Deputy Director, CDPR to James Goldstene, Executive Officer, CARB, July 20, 2011, Subject: Additional Fumigant Volatile Organic Compound Regulations, Enclosure 2-2.

2. Completeness Determinations

CAA section 110(k)(1)(B) requires EPA to determine whether a SIP submittal is complete within 60 days of receipt. This section also provides that any SIP submittal that EPA has not affirmatively determined to be complete or incomplete will become complete by operation of law six months after the day of submittal. A completeness review allows EPA to determine if the submittal includes all the necessary items and information it needs to act on it.

EPA makes completeness determinations using criteria that it established in 40 CFR part 51, Appendix V. These criteria fall into two categories: administrative information and technical support information. The administrative information provides documentation that the state has followed basic administrative procedures during the SIP-adoption process and thus EPA has a legally-adopted SIP revision in front of it. The technical support information provides the information EPA needs to determine the impact of the proposed revision on attainment and maintenance of the air quality standards.

EPA notifies a state of its completeness determination by letter unless the submittal became complete by operation of law. A finding of completeness does not approve the submittal as part of the SIP nor does it indicate that the submittal is approvable. It does start the 12-month clock under CAA section 110(k)(2) for final EPA action on the SIP submittal.

The October 12, 2009 submittals of the field fumigant regulations and the revised SJV Pesticide commitment became complete by operation of law on April 12, 2010. The August 2,

2011 submittal of revisions to the field fumigant regulations became complete by operation of law on February 2, 2012.

TABLE 5 – ADOPTION, SUBMITTAL, AND COMPLETENESS TIMELINE FOR REVISIONS TO THE CALIFORNIA SIP PESTICIDE ELEMENT

DATE	ACTION
September 27, 2007	CARB adopts 2007 State Strategy including the CDPR SIP commitment for San Joaquin Valley (found on page 131 of the 2007 State Strategy).
November 16, 2007	CARB submits the 2007 State Strategy including the CDPR SIP commitment for San Joaquin Valley. (CARB withdrew this version of CDPR SIP commitment for San Joaquin Valley on October 12, 2009.)
January 25, 2008	CDPR revises title 3 of the California Code of Regulations to incorporate regulations to limit emissions of VOC from the application of fumigants in five California ozone nonattainment areas. This regulations include 3 CCR section 6447 (first paragraph only) and sections 6447.3—6452 pertaining to field fumigation methods. (CDPR refers to this set of regulations as VOC-1.)
January 28, 2008	CARB submits portions of CDPR's adopted fumigant regulations (VOC-1) for inclusion in California's State Implementation Plan (SIP). (CARB withdrew these regulations on October 12, 2009.)
September 3, 2008	CDPR revises the fumigant regulations (3 CCR section 6452.2) to phase-in the fumigant VOC emission allocation system applicable in Ventura County. (CDPR refers to this set of revisions as VOC-2.)
April 17, 2009	CDPR adopts revised SIP commitment for San Joaquin Valley.
April 20, 2009	CDPR revises the fumigant regulations (3 CCR section 6452.2) to recalculate the emission benchmarks for each of the five applicable nonattainment areas. (CDPR refers to this set of revisions as VOC-3.)
October 12, 2009	CARB submitted portions of the fumigant regulations to EPA (VOC-1, VOC-2, and VOC-3). This submittal superseded the January 28, 2008 submittal, and included: • 3 CCR section 6447 (first paragraph only) and 3 CCR sections 6447.3-6452 pertaining to field fumigation methods. • 3 CCR sections 6452.1 and 6452.4 and 3 CCR sections 6624 and 6626 pertaining to the emissions recordkeeping, reporting, and inventory. • Portions of 3 CCR sections 6452.2 and 6452.3 pertaining to field fumigation limits and allowances only as applicable to the Ventura County ozone nonattainment area.
October 12, 2009	CARB submits the CDPR revised SIP commitment for San Joaquin Valley.
April 12, 2010	CARB's October 12, 2009 submittals became complete by operation of law pursuant to CAA section 110(k)(1)(B).

TABLE 5 – ADOPTION, SUBMITTAL, AND COMPLETENESS TIMELINE FOR REVISIONS TO THE CALIFORNIA SIP PESTICIDE ELEMENT

DATE	ACTION
April 7, 2011	CDPR adds or revises these fumigant regulations: 3 CCR sections 6448.1, 6449.1, 6450.1 (fumigation method restrictions); section 6452.2 (fumigant VOC emission limits); section 6452.3 (field fumigant VOC emission allowances); section 6452.4 (annual VOC emissions inventory report); and section 6626 (pesticide use reports for production agriculture). (CDPR refers to this set of revisions as VOC-4.)
May 11, 2011	CDPR adds or revises these fumigant regulations: 3 CCR section 6400 (restricted materials); section 6446 (general requirements); section 6446.1 (methyl iodide field fumigation methods); section 6452.4 (annual VOC emissions inventory report); and section 6624 (pesticide use records). (CDPR refers to this set of revisions as VOC-5.)
August 2, 2011	CARB submitted portions of the fumigant regulations (VOC-4 and VOC-5). This submittal revised and added to the October 12, 2009 submittal, and included the following: • 3 CCR section 6400 pertaining to restricted materials. • 3 CCR sections 6446, 6446.1, 6448.1, 6449.1, and 6450.1 pertaining to fumigation method restrictions. • Portions of 3 CCR sections 6452.2 and 6452.3 pertaining to field fumigation limits and allowances in the Ventura County federal ozone NAA. The portions of sections 6452.2 and 6452.3 pertaining to field fumigation limits and allowances in the Sacramento Metro, San Joaquin Valley, South Coast, and Southeast Desert federal ozone NAAs are not included for submittal to U.S. EPA. • 3 CCR section 6452.4 pertaining to the annual VOC emissions inventory report. • 3 CCR sections 6624 and 6626 pertaining to pesticide use records and reports.
February 2, 2012	CARB's August 2, 2011 submittal became complete by operation of law pursuant to CAA section 110(k)(1)(B).

B. Enforceability

1. CAA Requirements for Enforceability of Rules and Commitments

CAA sections 110(a)(2)(A) and 172(c)(6) require that SIP "shall include enforceable emission limitations, and such other control measures, means or techniques (...) as well as schedules and timetables for compliance, as may be necessary or appropriate for attainment...."

In order to be enforceable, SIP regulations and commitments must be clear regarding, for example, who must comply, by what date, the standard of compliance, the methods used to determine compliance, and the process and criteria for obtaining any variation from the normal

mode of compliance.[24] Guidance used to help evaluate enforceability includes the "Bluebook" and "the Little Bluebook."[25]

2. Evaluation and Conclusions

a. CDPR Regulations

CDPR's regulations are clear and specific. They describe the specific requirements related to field fumigation and methods, by fumigant, for five ozone nonattainment areas during May 1- October 31, the peak ozone season. See portions of 3 CCR sections 6447.3 – 6452. For example, section 6447.3 (Methyl Bromide Field Fumigation Methods) specifies that of six allowable methyl bromide application methods, the Nontarpaulin/Shallow Bed; Nontarpaulin/Deep Broadcast; Tarpaulin/Shallow/Bed; Drip System and, in specific circumstances, Tarpaulin/Shallow/Broadcast and Tarpaulin/Deep Broadcast methods are prohibited in the SJV, SED and Ventura County nonattainment areas from May 1 through October 31. Provisions for each fumigant specify maximum application rates, and, as applicable, soil moisture requirements, minimum injection depths and spacing, type of equipment used, post water treatment rates and timing, tarpaulin application requirements, and "tarpaulin repair response plans."

Section 6452 establishes a process and criteria for requesting and approval of an alternate method on a 3-year interim basis. The request to implement a method not described in the regulations must be accompanied by scientific data documenting the VOC emissions, and that the method will not result in emissions greater than any one of the methods described and permitted in the regulations. The director must consider criteria such as data sufficiency and validity, and representativeness of field conditions studied.

The regulations include recordkeeping requirements in section 6624 (Pesticide Use Records) and the reporting requirements in section 6626 (Pesticide Use Reports for Production Agriculture). Among these recordkeeping and reporting requirement is the provision that requires any person who uses a fumigant in any of the five ozone nonattainment areas must record and report a description of the application method. See sections 6624(f) and 6626(d). The requirements for methods used, alternate methods, recordkeeping and report requirements and other rule provisions in the submitted regulations are clear and adequate to ensure that California's submitted fumigant regulations are enforceable as required by of CAA section 110(a)(2)(A).

We received several comments on our proposed conclusion that the fumigant regulations met the CAA requirement for enforceable emission limitations. We respond to these comments in Section III.D. None of these comments revised our initial conclusion that the regulations are enforceable.

[24] "Review of State Implementations Plans and Revisions for Enforceability and Legal Sufficiency" (Enforceability Guidance), Craig Potter, EPA, September 23, 1987. http://www.epa.gov/compliance/resources/policies/civil/caa/stationary/review-enf-rpt.pdf. See also General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990. 57 FR 13498, 13502 and 13541 (April 16, 1992) (General Preamble) and CAA sections 110(a)(2) and 172(c)(6).

[25] "Issues Relating to VOC Regulation Cutpoints, Deficiencies, and Deviations," U.S. EPA, OAQPS, May 25, 1988 (The Bluebook) and "Guidance Document for Correcting Common VOC and Other Rule Deficiencies," U.S. EPA Region IX, August 21, 2001 (the Little Bluebook).

b. Revised SIP Commitment for the San Joaquin Valley

CDPR's commitment to ensure that VOC emissions from commercial structural and agricultural pesticide use do not exceed 18.1 tpd in the SJV is clear. The mechanism to track compliance with the limits is an annual emissions inventory report which is required by both the commitment and 3 CCR section 6452.4. (Annual Volatile Organic Compound Emissions Inventory Report). Procedures for calculating emissions are included in the Neal memorandum and 3 CCR section 6452.4(a)(1) and the requirement for sources (e.g., pesticide applicators) to keep and report the data necessary for preparing the annual emissions inventory report is required by 3 CCR section 6624 (Pesticide Use Records) and section 6626 (Pesticide Use Reports for Production Agriculture) These provisions are adequate in combination with the fumigant regulation and the to ensure the limit for the SJV is enforceable as required by CAA section 110(a)(1)(A).

CDPR has also committed to implement restrictions on VOC emissions from non-fumigant regulations by 2014. EPA interprets "by 2014" to mean by May 1, 2014 given that CDPR projects emissions reductions from these restrictions in 2014. See revised SIP commitment for SJV, page 2. To achieve reductions in 2014, the restriction would need to be implemented by the beginning of summer ozone season (May 1) in that year. CDPR does not commit to a specific emissions reduction from the additional restrictions on non-fumigant pesticide; however, the restrictions are part of CDPR's regulatory program to ensure that the inventory target of 18.1 tpd in the SJV is not exceeded (*Id.* at page 1), which effectively defines the needed stringency. This commitment is sufficiently clear and adequate to ensure that is enforceable as required by CAA section 110(a)(1)(A).

We received several comments on our proposed conclusion that the revised commitment for SJV meets the CAA requirement for enforceable emission limitations. We respond to these comments in Section III.B. None of these comments revised our initial conclusion that the commitment is enforceable.

C. Reasonably Available Control Measures/Reasonably Available Control Requirements (RACM/RACT)

1. Requirements for RACM/RACT

CAA section 172(c)(1) requires that each attainment plan "provide for the implementation of all reasonably available control measures as expeditiously as practicable (including such reductions in emissions from existing sources in the area as may be obtained through the adoption, at a minimum, of reasonably available control technology), and shall provide for attainment of the national primary ambient air quality standards." RACM is a requirement only for nonattainment areas.

EPA defines RACM as any potential control measure for application to point, area, on-road and non-road emissions source categories that meets certain criteria. These criteria include whether the measure is technologically and economically feasible and either individually or collectively with other such measures can advance the attainment date by at least one year. See

57 FR 13498, 13560 (April 16, 1992).[26] The determination as to whether a SIP provides for the implementation of RACM as required by CAA section 172(c)(1) is done as part of an area's attainment and reasonable further progress plans and not on a rule-by-rule basis.

For ozone nonattainment areas classified as moderate or above, CAA section 182(b)(2) requires the implementation of reasonably available control technologies (RACT) on all major sources of VOC and for each VOC source category for which EPA has issued a Control Techniques Guideline (CTG). CAA section 182(f) requires that RACT under section 182(b)(2) also apply to major stationary sources of NO_x. In areas classified as severe (such as SED (classification pending), Ventura County, and Sacramento), a major source is a stationary source that emits or has the potential to emit at least 25 tons of VOC or NO_x per year. See CAA sections 182(d) and (f). For areas classified as extreme (South Coast and SJV), a major stationary sources is one that emits or has the potential to emit at least 10 tons of VOC or NO_x per year. See CAA sections 182(e) and (f).

The revisions to the California SIP Pesticide Element that we evaluate here are intended to reduce VOC emissions in the South Coast, SED, Ventura County, SJV, and Sacramento Metro ozone nonattainment areas. VOC emissions contribute to the formation of ozone and secondary particulate matter. EPA, though, has determined by rule that states do not need to address controls for sources of VOC emissions for $PM_{2.5}$ standard attainment unless the state and/or EPA make a technical demonstration that such controls would significantly contribute to reducing $PM_{2.5}$ concentrations in the nonattainment area. See 40 CFR § 51.1002(c)(3). Such a determination would be made in the context of each area's plan for attainment of the $PM_{2.5}$ standards.

2. RACM/RACT Evaluation and Conclusion

a. Field Fumigant Regulations: South Coast, Ventura County, Southeast Desert, San Joaquin Valley, and Sacramento Metro

CARB's 2009 submittal of the field fumigant regulations did not include a demonstration of how the field fumigation methods implement reasonably available control technology (RACT).[27] Subsequently, CDPR provided a document containing more detailed information on its RACT evaluation of fumigation methods.[28] This document contains a general discussion of strategies for controlling VOC emissions from fumigants and an evaluation of field fumigation method options, including the basis for those accepted and those rejected by CDPR for inclusion in its regulations. It discusses current research on fumigant VOC emissions reduction methods,

[26] See also "State Implementation Plans; General Preamble for Proposed Rulemaking on Approval of Plan Revisions for Nonattainment Areas," 44 FR 20372 (April 4, 1979); memorandum, John Seitz, Director, OAQPS to Regional Air Directors, November 30, 1999, subject: Guidance on the Reasonably Available Control Measure Requirement and Attainment Demonstration Submissions for Ozone Nonattainment Areas; and memorandum, John S. Seitz, Director, Office of Air Quality Planning and Standards, EPA, subject: Additional Submission on RACM from States with Severe One-Hour Ozone Nonattainment Area SIPs, December 14, 2000.

[27] See letter, Andrew Steckel, EPA Region 9 to Frank Spurlock, CDPR and Mike Guzzetta, CARB, November 2, 2010.

[28] See letter and attachments, Randy Segawa, CDPR to Andrew Steckel, EPA-Region 9, Reducing Volatile Organic Compound Emissions from Pesticides: Analysis of Alternatives for Field Fumigation Methods, June 28, 2011.

including a reevaluation of fumigants to obtain additional data to replace surrogate data used in developing the adopted regulations.

Field fumigation emissions are considered fugitive emissions because they are emissions that "could not reasonably pass through a stack, chimney, vent, or other functionally-equivalent opening."[29] As noted above, CAA section 182(b)(2) requires RACT be applied to all major stationary sources in an ozone nonattainment area. EPA has not yet defined by rule whether fugitive emissions must be included in determination of major source status for the purposes determining the application of section 182(b)(2) RACT requirement; however, EPA believes, based on the information provided in the CDPR's alternatives analysis, and the research cited to support it, that CDPR has demonstrated that the proposed regulations are stringent enough to implement RACT-level controls on the application of pesticides.

On January 10, 2012, EPA partially approved and partially disapproved the section 182(b)(2) RACT SIP submitted by California on June 18, 2009 for the SJV ozone nonattainment area. The partial disapproval was based in part on our conclusion that the State had not fully satisfied CAA section 182(b)(2) RACT requirements for the application of fumigants. See 77 FR 1417, 1425 (January 10, 2012). Based on our finding here that CDPR's field fumigant regulations provide RACT-level controls on this source category, the approval of these regulations would satisfy California's obligation to implement RACT under CAA section 182(b)(2) for this source category for the 1-hour ozone and 1997 8-hour ozone standards for the SJV RACT SIP and thereby terminates both the sanctions clocks and the Federal Implementation Plan clock for this source category triggered by our January 10, 2012 partial disapproval action. 77 FR 1417 (January 10, 2012).

EPA has recently approved the attainment, RFP and RACM demonstrations in the 8-hour ozone SIPs for the South Coast and SJV and the $PM_{2.5}$ SIP for the South Coast (which did include VOC reductions in its RFP and attainment demonstrations). [30] These demonstrations relied in part on VOC control measures in the 2007 State Strategy; however, EPA's approval of these demonstrations did not rely on emissions reductions from CDPR's field fumigant regulations. Therefore, their approval into the SIP is consistent with the approved RACM demonstrations.

CARB has submitted SIPs to address attainment of the 1997 8-hour ozone standard in the SED, Ventura County, and Sacramento Metro nonattainment. EPA has not yet acted on these plans although we note that none rely on reductions from controls on pesticides.

We received no comments on our proposed finding that the fumigant regulations met the CAA section 182(b)(2) RACT requirement.

[29] See 40 CFR 70.2 (Definitions).

[30] See 76 FR 69928 (November 9, 2011) (South Coast $PM_{2.5}$ Plan), 77 FR 12652 (March 1, 2012) (SJV 2007 8-hour Ozone SIP), and 77 FR 12674 (March 1, 2012) (South Coast 8-hour Ozone Plan). EPA has also recently approved the SJV 2008 $PM_{2.5}$ SIP which relied in part on measures in the 2007 State Strategy. In approving that SIP, EPA concurred with the State's determination that VOC did not need to be controlled for $PM_{2.5}$ attainment in the SJV and therefore the plan did not include did not need to evaluate VOC control measures as part of its RACM demonstration. See 76 FR 69896, 69924 (November 9, 2011). The $PM_{2.5}$ plan for the Sacramento Metro area is not due until late 2012.

b. Revised SIP Commitment for the San Joaquin Valley

As noted above, the demonstration that a SIP provides for the implementation of RACM as required by CAA section 172(c)(1) is done as part of an area's attainment and reasonable further progress plans and not on an individual rule or commitment basis.

EPA recently approved the 2007 8-hour ozone SIP for the SJV, including the SIP's RACM demonstration. See 77 FR 12652 (March 1, 2012). To demonstrate that the SIP provided for RACM, California relied in part on measures in the 2007 State Strategy, including the revised SIP commitment for the SJV (as revised April 17, 2009) that is being approved here. However, because it had not yet approved the commitment into the SIP, EPA did not grant any emissions reductions credit to the commitment in either the RFP or attainment demonstration, nor did it rely on the commitment to make the determination that the 2007 SIP provided for RACM.[31] Because EPA's approvals of the attainment, RFP, and RACM demonstrations in the SJV 2007 8-hour ozone SIP did not rely on emissions reductions from CDPR's commitment to limit pesticide VOC emissions in the SJV to 18.1 tpd, its approval into the SIP is consistent with the approved RACM demonstration.

We received no comments on our proposed finding that an approval of the revised SIP commitment for SJV is consistent with the approved RACM demonstrations for the SJV.

D. Finding of Non-Interference with Applicable Requirements of the CAA under Section 110(l)

1. CAA Section 110(l) Requirements

Revisions to the SIP, including revisions to SIP-approved control measure, must meet the requirements of CAA section 110(l) to be approved by EPA. CAA section 110(l) "Plan Revisions" provides in relevant part:

> "The Administrator shall not approve a revision of a plan if the revision would interfere with any applicable requirement concerning attainment and reasonable further progress (as defined in [section 171]) or any other applicable requirement of [the CAA]."[32]

EPA interprets section 110(l) to apply to all requirements of the CAA and to all areas of the country, whether attainment, nonattainment, unclassifiable, or maintenance for one or more of the six criteria pollutants. It also interprets section 110(l) to require a demonstration addressing all pollutants whose emissions and/or ambient concentrations may change as a result of the SIP revision. The scope and rigor of an adequate section 110(l) demonstration of noninterference depends on the air quality status of the area, the potential impact of the revision on air quality, the pollutant(s) affected, and the nature of the applicable CAA requirements.

[31] See Air Division, EPA Region 9, "Final Technical Support Document and Response to Comments Final Rule on the San Joaquin Valley 2007 Ozone Plan and the San Joaquin Valley Portions of the 2007 State Strategy," December 15, 2011, p. 51-57.

[32] CAA section 110(l) also provides that each SIP revision submitted by a state must be adopted by the state after reasonable notice and public hearing. EPA addresses this provision in section II.A. of this TSD.

In reviewing a modification to an approved SIP provision, EPA looks to see to what extent the existing SIP has relied on that provision to meet applicable CAA requirements. For emissions reduction measures, its generally concludes that the revision will not interfere with any applicable requirement related to attainment or RFP if the revised SIP will provide the same or more emissions reductions on the same or similar schedule as the existing SIP. EPA notes, however, that CAA section 110(l) does not bar approval of SIP revisions that may result in higher levels of emissions than would potentially occur under the unrevised SIP; only that such revisions do not result in the applicable SIP no longer providing for expeditious attainment or RFP or complying with any other applicable requirements of the CAA.

2. Evaluation and Conclusion

The SIP submittals that are being approved and incorporated into the California SIP control VOC emissions in five California areas: South Coast, Southeast Desert, Ventura County, SJV, Sacramento Metro ozone nonattainment areas. Neither the field fumigant regulations nor the SJV revised SIP commitment explicitly regulated any other pollutant besides VOC. VOC is a precursor pollutant for ozone as well as for both fine ($PM_{2.5}$) and coarse (PM_{10}) particulate matter.[33] At this time only the South Coast's SIPs rely on VOC controls for $PM_{2.5}$ or PM_{10} attainment and none of its adopted particulate matter plans rely on reductions from the California SIP Pesticide Element to demonstrate attainment, RFP, or RACM or to meet any other requirement of the CAA.

Each area's current attainment designation for the current ozone and particulate matter (PM) standards is shown on Table1 above. This table also provides information on the current status of the areas' implementation plans for the current ozone and particulate matter standards and the revoked 1-hour ozone standard.[34] In section I.F, EPA provides a more detailed discussion of the relationship (or lack thereof) of the California SIP's Pesticide Element to each area's nonattainment area plans.

a. Attainment and Reasonable Further Progress for Ozone and Particulate Matter

i. Field Fumigant Regulations

CDPR's field fumigant regulations are the first such regulations incorporated into the California SIP. Their approval will strengthen the SIP by providing SIP-enforceable measures and compliance procedures to reduce emissions from the application of fumigants in the five ozone nonattainment areas covered by the regulations. Their approval will also aid compliance with the approved California SIP Pesticide Element's provisions for reducing VOC emissions by 20 percent from 1990 baseline levels in the South Coast, Southeast Desert, Ventura County and Sacramento Metro ozone nonattainment areas. Their approval will also aid compliance with the proposed 18.1 tpd limit on pesticide VOC emissions in the San Joaquin. Therefore, EPA finds

[33] While EPA considers VOC to be a precursor to PM, it does not require control of VOC emissions for PM standard attainment in most instances. See 72 FR 20586, 20589 (April 25, 2007) and 57 FR 13498, 13538 (April 16, 1992).

[34] EPA revoked the 1-hour ozone standard in all areas of the country, including the five areas subject to the pesticide element, effective 2005. See 69 FR 23951 (April 30, 2004). Under EPA's implementation rule for the 8-hour ozone standard, certain "applicable requirements" that applied under 1-hour ozone standard planning requirements continue to apply to 8-hour ozone nonattainment areas. See 40 CFR § 51.900(f). The 1994 Pesticide Element is not one of the applicable requirements under the 8-hour implementation rule.

that approving the field fumigant regulations into the California SIP will not interfere with any applicable requirement concerning attainment and reasonable further progress or with any other applicable requirement of the CAA.

We received no comments on our proposed finding that approval of the fumigant regulations would not violate section 110(l).

ii. Revised SIP Commitment for the San Joaquin Valley

In 1997, EPA approved the 1994 Pesticide Element into the California SIP. See 62 FR 1150, 1170 (January 8, 1997). As approved, the 1994 Pesticide Element was to reduce VOC emissions from agricultural and commercial structural pesticide applications by a maximum of 20 percent from the 1990 baseline emissions inventory by 2005 in areas that relied on VOC reductions from pesticides in their attainments plans with reductions occurring linearly from 1990 to 2005 but it allowed for less than 20 percent if fewer VOC reductions from pesticide were needed. See 1994 Pesticide SIP, p. 1.

The attainment demonstration for the SJV in the 1994 Ozone SIP relied in part on reductions of 12 percent from 1990 emissions levels from the 1994 Pesticide Element to demonstrate attainment by the area's then-applicable attainment deadline of November 15, 1999. In approving the 1994 Pesticide Element and the SJV ozone attainment demonstration, EPA credited the element with 13 tpd (in 1994 SIP currency) in VOC emissions reductions in 1999.[35,36] At the same time, EPA noted that California had committed to adopt and submit any regulations necessary to reduce VOC emissions from agricultural and commercial structural pesticides by 12 percent in 1999.[37] See 61 FR 10920, 10935 (March 18, 1996).

In 2003, CARB updated the strategy that was part of the 1994 Ozone SIP. One of the measures in the 2003 State Strategy was PEST-1 ("Implement Existing Pesticide Strategy"), which retained the provisions of the 1994 Pesticide Element. In 2004, CARB submitted the 2004 Extreme [1-hour Ozone] Attainment Plan for the SJV which relied in part on the 2003 State Strategy for the reductions needed to demonstrate attainment by SJV's new applicable attainment date of November 15, 2010. On page 27 of its staff report for that plan, CARB discusses the measures in the 2003 State Strategy and provides an interpretation of the PEST-1 measures as it related to the SJV including PEST-1. It described the measure as a "[c]ontinuation of the Department of Pesticide Regulation's approved SIP obligation to reduce volatile emissions from pesticides [which f]or the San Joaquin Valley, …means a pesticide VOC emissions target of 12 percent less than 1990 levels."

[35] The 13 tpd figure was provided by CARB on page A-2 and in Attachment C of the June 18, 1996 Boyd Letter. EPA incorporated the Boyd/Howekamp letter into the SIP. See 40 CFR § 52.220(c)(236).

[36] The 13 tpd figure was provided by CARB on page A-2 and in Attachment C of the Boyd Letter. For the 1994 Ozone SIP, the State estimated that VOC emissions from pesticide use in 1990 in the SJV were 62.5 tpd. A 12 percent reduction from this level would require reducing overall pesticide emissions to be no more than 55.0 tpd in 1999. The State further estimated that without controls, VOC emissions from pesticides in the SJV would increase to 67.9 tpd by 1999, thereby requiring a reduction of 12.9 tpd (67.9 tpd minus 55.0 tpd, rounded to 13 tpd) in 1999 in order to meet the target level for a 12 percent reduction. See CDPR, Staff Report on the Department of Pesticide Regulation's Proposed SIP Commitment for San Joaquin Valley," undated, p. 1, ftn 1.

[37] A 20 percent reduction that was to occur linearly over the fifteen years between 1990 and 2005 would accrue reductions at a rate of 1.33 percent per year (20 percent divided by 15 years) resulting in a 12 percent reduction by 1999 (9 years times 1.33 percent per year) .

EPA approved PEST-1 as it relates to the South Coast into the SIP as part of its action to approve in part and disapprove in part the 2003 South Coast AQMP. See 74 FR 10176 (March 10, 2009), codified at 40 CFR § 52.220(c)(339)(ii)(A)(*1*).

EPA has not approved other changes to the SJV-related provisions of 1994 Pesticide Element nor has it granted any emissions reductions credit for the 1994 Pesticide Element beyond the 13 tpd (in 1994 SIP currency) approved as part of its action on the 1994 Ozone SIP.[38]

On October 12, 2008, California submitted revisions its SIP Pesticide Element for the SJV to replace the requirement to achieve a reduction in VOC emissions from pesticides with a limit on overall VOC emissions from pesticides in the SJV of 18.1 tpd of VOC during the high ozone season of May 1 and October 30. The 18.1 tpd emission limit equates to a reduction of 12 percent from the current estimate of 1990 pesticide VOC emissions in the SJV.[39]

Based on its review of the submitted revision, EPA finds that the revision will result in, at minimum, the same emissions reductions that are currently required by the approved SIP and will not delay those reductions given that the limit is currently effective. EPA, therefore, finds that approving CDPR's commitment to manage VOC emissions from commercial structural and agricultural pesticide use to ensure that they do not exceed 18.1 tpd in into the California SIP will not interfere with any applicable CAA requirement concerning attainment and reasonable further progress or any other applicable requirement of the CAA.

In comments that EPA received on its proposed approval of the SJV 2004 Extreme ozone Attainment Plan (74 FR 33933 (July 14, 2009)), several non-governmental organizations argued that the 1994 Pesticide Element requires a 20 percent reduction in VOC emissions from 1990 levels by 2005 in the SJV[40] citing to the Boyd/Howekamp letter on page A-2. In the Boyd/Howekamp letter, CARB provided EPA with suggested revisions to its March 18, 1996 (61 FR 10920, 10935) proposed approval of the 1994 Ozone SIP. In reference to the Pesticide Element, CARB stated that the "commitment is for a 20% reduction from 1990 levels by 2005 in each SIP area, except [San Diego]. [CARB] only took credit in the attainment year: SJV 1999 = 12%; Sac 2005 = 20%; Ven 2005 = 20%; SED 2007 = 20%; SC 2010 = 20%."

EPA does not find the "commitment is for a 20% reduction" statement determinative as to the State's commitment for SJV, not only because it is immediately contradicted by the statement that a 12 percent credit was taken only in the attainment year of 1999 but also because it is not entirely consistent with the more extensive language describing the emissions reductions target in other parts of the approved 1994 Pesticide Element and does not reflect the reductions relied on in the SIP.

The 1994 Pesticide Element committed CDPR to a "maximum of 20 percent" reduction in pesticide VOC emissions from 1990 baseline levels in areas "which reference VOC

[38] We have approved two ozone plans for the SJV since the 1997: the 2004 Ozone Plan in 2010 and the 2007 8-hour Ozone Plan in 2012. See 75 FR 10420 (March 8, 2010) and 77 FR 12652 (March 1, 2012). Neither plan nor our approval of them relied on reductions in pesticide VOC emissions to meet any applicable CAA requirement.

[39] See CDPR, Staff Report on the Department of Pesticide Regulation's Proposed SIP Commitment for San Joaquin Valley," undated.

[40] See letter, Brent Newell, Legal Director, Center on Race, Poverty & the Environment, August 31, 2009, "Comments on Approval and Promulgation of Implementation Plans: 1-Hour Ozone Extreme Area Plan for San Joaquin Valley, CA (Docket No. EPA-R09-OAR-2008-0693)," pp. 16-20.

reductions" from the element in their plans. See 1994 Pesticide SIP, p. 1. With this language, the percent reduction required in an area is tied to the emissions reductions referenced, that is, relied on, in that area's plan. As approved, the 1994 Pesticide Element also allowed for reductions of less than 20 percent if fewer VOC reductions from pesticide were needed. *Id*. As noted above, the reductions relied on in the 1994 Ozone SIP in its attainment demonstration for SJV in 1999 were 13 tpd (in 1994 SIP currency) which equates to 12 percent reduction from 1990 baseline in 1999 (when anticipated growth in pesticide VOC emissions between 1990 and 1999 is excluded) and no additional reductions have been relied on in any SIP for SJV subsequent to the 1994 one.

Approval of the revised SIP commitment for the SJV (submitted in 2009) will not interfere with any applicable requirement related to attainment or reasonable further progress for any $PM_{2.5}$ or PM_{10} standard in the SJV. EPA has determined that VOC controls are not required for particulate matter control in the SJV. See 72 FR 20586, 20589 (April 25, 2007), 69 FR 30006, 30007 (May 26, 2004), and 76 FR 69896, 69924 (November 9, 2011).

Approval of the revised SIP commitment for the SJV will not interfere with any applicable requirement related to attainment or reasonable further progress for any $PM_{2.5}$ or PM_{10} standard in the SJV. EPA has determined that VOC controls are not required for particulate matter control in the SJV. See 69 FR 30006, 30011 (72 FR (May 26, 2004) and 76 FR 20586, 20589 (November 9, 2011).

We received several comment on whether approval of the revised SIP commitment for SJV would violate CAA section 110(l). We have fully responded to each of these comments in section III.C. of this TSD. None of these comments revised our initial conclusion that approval of the revised commitment would not violate section 110(l).

b. RACM for Ozone and Particulate Matter

EPA has approved the RACM demonstrations in the 8-hour ozone $PM_{2.5}$ SIP for the South Coast. EPA has also approved RACM/best available control measure (BACM) demonstrations in the PM_{10} SIPs for South Coast and SED.[41] The approval of the fumigant regulations is consistent with these approved RACM/BACM demonstrations and therefore will not interfere with these SIPs' compliance with the RACM/BACM requirements.

EPA has approved the 8-hour ozone SIP for SJV.[42] The approvals of the fumigant regulations and the revised SIP commitment for the SJV are consistent with these approved RACM demonstration and therefore will not interfere these SIP's compliance with the RACM requirements.

CARB has submitted SIPs to address attainment of the 1997 8-hour ozone standard in Sacramento Metro, SED, and Ventura County. EPA has yet to act on these plans. Because there is no approved RACM demonstration for the 8-hour SIP and approval of the fumigant regulations will strengthen the SIP, its approval does not interfere with the applicable requirement for RACM in these areas.

[41] 76 FR 69928 (November 9, 2011) (South Coast $PM_{2.5}$); and 77 FR 12674 (March 1, 2012) (South Coast 8-hour ozone); and 70 FR 69081 (November 14, 2005) (South Coast and Coachella (SED) PM_{10}).

[42] 77 FR 12652 (March 1, 2012) (SJV 8-hour ozone).

c. Air Toxics/Stratospheric Ozone

Since the CAA does not have ambient air quality standards for air toxics, EPA's interpretation of section 110(l) is that an area's compliance with any applicable Maximum Achievable Control Technology (MACT) standards, as well as any applicable Federal Motor Vehicle Control Programs (FMVCP) air toxic requirements under CAA sections 112 or 202(l) constitutes an acceptable demonstration of noninterference for air toxics.

There are no MACT standards applicable to pesticide application and pesticides[43] are not regulated under the air toxic component of the FMVCP; therefore, these SIP revisions will not interfere with any MACT or FMVCP that apply in of these areas affected by these SIP revisions. For these reasons, the EPA find that this these approvals do not interfere with any applicable CAA requirements relative to air toxics.

d. Other Applicable CAA Requirement

EPA is unaware of any other CAA requirements that would be adversely affect by its approval of these SIP revisions.

E. Additional Recommendations for the Next Rule Revision

The following revisions are not currently the basis for rule disapproval, but are recommended for the next time the rule is amended.

1. We recommend inserting language in the next field fumigant rule revision clarifying that, in case of conflict between federal (e.g., labels), state, or local requirements, those requirements that result in the lowest VOC emissions apply.
2. In future revisions of the rule, EPA recommends that CDPR consider expanding the period for requirements from May-October to include the full year even though there are few exceedances of the ozone standards in March-April timeframe.[44] EPA bases its recommendation on the following: 1) Ozone standards are more stringent now than when the 1994 SIP was approved, so there is a potential for more exceedances in the "shoulder" months and 2) expanding the restrictions outside the May-October time period could lead to additional VOC reductions.
3. 3 CCR section 6452.4(b) provides for a 45-day public comment period on the draft annual emissions report, which may include modified emission ratings (section 6452.4(c)). The rule is not clear as to how the public will be notified that the draft report and ratings are available for comment. EPA recommends that CDPR explain the process

[43] EPA has promulgated a MACT standard for pesticide active ingredient production at 40 CFR part 63, Subpart MMM – National Emission Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production. This MACT standard applies to the production of pesticide active ingredients, which is not regulated by the proposed revisions to the California SIP Pesticide Element, and not to their application to agricultural fields and products or their commercial application to structures, which is regulated by the 1994 Pesticide Element. See 40 CFR § 63.1360.

[44] About 3 percent of total exceedance days during the period 2005 to 2011 in Ventura and SJV occurred outside of the May 1 to October 31 period. See Environmental Protection Agency, Violation Day Count Report (Ventura County 2005-2011), April 16, 2012 and Environmental Protection Agency, Violation Day Count Report (San Joaquin Valley 2005-2011), April 16, 2012.

for notifying the public of this availability and the 45-day public comment period. EPA also recommends that the rule specify the annual date by which the final report will be issued.

4. The 2011 submittal eliminated the "ribbon" test for soil moisture in fine texture soils that was present in the 2009 submittal (see sections 6448.1, 6449.1, and 6450.1) but did not replace it with another test. Other soil types listed have associated tests. We recommend including a test for fine textured soil when the rule is amended.

5. Several terms used in the fumigant rules are neither defined nor referenced within the submittal. Section 6000 defines some of these (e.g., application block and restricted-entry interval), so this issue could be partly addressed by submitting section 6000 for SIP approval and referencing it within the fumigant requirements. Other terms are also not defined in section 6000 (e.g., air fan dilution system, broadcast, closing shoes, fumigation-handling activities, hot gas, raised-tarpaulin, soil capping, and tarpaulin cutting). EPA recommends adding definitions for all these terms in the SIP to improve clarity. However, these terms are generally understood by the regulated community, and EPA does not believe this omission significantly undermines rule enforceability at this time.

6. The submitted fumigation methods reference other provisions which are not submitted, e.g., sections 6447.3(a)(3)(F) and (5)(F) reference section 6784(b)(4) regarding tarpaulin cutting; section 6447.3(b) references section 6770 regarding field entry after pesticide applications; sections 6447.3(c), 6448.1(e), 6449.1(e), 6450.1(e), 6450.2(c) and 6451.1(b) reference section 6260 regarding research authorizations; section 6452.1 reference section 6624 regarding reporting information; section 6624(a)(1) references sections 11408 and 18663 regarding definitions of agricultural use and livestock, and section 6624(a)(2) references section 6400 regarding restricted materials. EPA recommends including all referenced sections in the SIP to improve clarity. However, these sections are generally not critical to implementation of the fumigant regulations, and EPA does not believe this omission significantly undermines rule enforceability at this time.

7. Consistent with CAA Title V and the federal statute of limitations, EPA recommends that section 6624(g) require that records be maintained for five years instead of two years.

III. Responses to Comments

A. Comments Received on the April 24, 2012 Proposed Approval of the Revision to the California SIP Commitment for the San Joaquin Valley.

EPA received one comment letter on its proposed approval of the fumigant regulations and CDPR's revised commitment for the SJV:

Brent Newell, General Counsel, Center on Race, Poverty and the Environment, May 24, 2012, re: Comments on Approval and Promulgation of Implementation Plans; California; Revisions to the California State Implementation Plan Pesticide Element (Docket No. EPA–R09-OAR–2012–0194). These comments were submitted on behalf of (collectively "El Comité"):

1. El Comité para el Bienestar de Earlimart,
2. Association of Irritated Residents,
3. Action Now,
4. Bay Area Healthy 880 Communities,
5. Bayview Hunters Point Community Advocates,
6. Breast Cancer Action,
7. Breast Cancer Fund,
8. Californians for Pesticide Reform,
9. California Rural Legal Assistance Foundation,
10. California Healthy Nail Salon Collaborative,
11. California Institute for Rural Studies,
12. California Church IMPACT,
13. California Environmental Health Initiative,
14. Center for Environmental Health,
15. Central Valley Air Quality Coalition,
16. Clean Water Action,
17. Clínica Sierra Vista,
18. Coalition for Clean Air,
19. Comité Civico del Valle,
20. Commonweal,
21. El Quinto Sol de América,
22. Food & Water Watch,
23. Fresno Metro Ministry,
24. Grayson Neighborhood Council,
25. Healthy Child Healthy World,
26. Institute of Popular Education of Southern California (IDEPSCA),
27. Just Transition Alliance,
28. Medical Advocates for Healthy Air,
29. MOMS Advocating Sustainability,
30. Natural Resources Defense Council,
31. Organización en California de Líderes Campesinas, Inc.,
32. Pesticide Action Network,
33. Pesticide Watch,
34. Physicians for Social Responsibility-Los Angeles,

35. San Joaquin Valley Latino Environmental Advancement and Policy Project,
36. Sierra Club California,
37. TriCounty Watchdogs,
38. Tri-Valley CAREs,
39. Ventura CoastKeeper,
40. Wishtoyo Foundation, and
41. Worksafe, Inc.

B. Enforceability of CDPR's Revised SIP Commitment for San Joaquin Valley

Comment B-1: El Comité argues that CDPR's revised SIP commitment to limit pesticide VOC emissions in the SJV to no more than 18.1 tpd is not enforceable because citizens may not enforce the manner in which the Department calculates the baseline inventory and subsequent years' inventories as a means to challenge a failure to adopt regulations or otherwise to limit pesticide VOC emissions. They (El Comité) also argue that including the inventory calculation procedures in the SIP would not make the revised commitment enforceable.

Response B-1: Except for the analysis required by CAA section 110(l), the SJV baseline (that is, the 1990 baseline used to calculate the required level of emissions reductions) is no longer at issue now that the State has fixed the maximum level of pesticide VOC emissions allowed in the SJV at a fixed 18.1 tons per day (tpd).[45] Once that limitation is incorporated into the SIP, the 1990 baseline inventory will be of only historical interest and neither it nor the calculation procedures used for it need to be enforceable.[46] Therefore, in addressing El Comité's arguments, we will focus on the enforceability of the calculation procedures for the subsequent years' inventories.

The "emissions inventories" required by both the revised SIP commitment for the SJV and the fumigant regulations should not be confused with the emissions inventories that are required by specific sections of the CAA, such as sections 172(c)(3) and 182(a)(1). They are not the same in either scope or purpose. CAA section 172(c)(3) requires SIPs to "include a comprehensive, accurate, current inventory of actual emissions from all sources of the relevant pollutant or pollutants in such [nonattainment] area…." The purpose of the comprehensive

[45] Fixed, that is, without the State first seeking and EPA approving through notice and comment rulemaking a revision to the SIP. To be approved, such a SIP revision would need to meet all applicable CAA requirements and not be barred under the section 110(l) non-interference provisions. CDPR makes the same point in its responses to comments on 2009 revisions to the fumigant regulations:

> To clarify, emission ratings for application methods that were used in 1990 may not be modified, absent a SIP revision. Similarly, regarding nonfumigant pesticides, DPR will not revise the emission potentials (VOC content) of formulations that were used in the base year, absent a SIP revision. This was not specifically referenced in the Neal memorandum, but follows from the decision to freeze the baseline.

CDPR, "Final Statement of Reasons and Public Report, CDPR, Title 3, California Code of Regulations, Amend Section 6452.2, Pertaining to Field Fumigant Emission Limits," undated (for rule amendment originally noticed in the California Regulatory Notice Register on November 28, 2008), p. 18.

[46] This holds true for Ventura County also because CPDR has effectively fixed the maximum level of pesticide VOC emissions allowed in Ventura County at 3 tpd. See 3 CCR sections 6452.2.

inventories required by this and similar CAA sections are to provide the basis for, among other things, the demonstrations of attainment and progress toward attainment required (for extreme ozone nonattainment such as the SJV area) by CAA sections 182(c)(2)(A), 182(b)(1), and 182(c)(2)(B).[47] Emissions inventories submitted to meet the CAA's specific inventory requirements are intended to describe but not control emissions from sources and source categories in the inventory and thus are not enforceable emission limitations as defined by CAA section 302(k).

In contrast, the "emissions inventory" called for in the revised SIP commitment and fumigant regulations is not a specific requirement of the CAA. It is instead an emission estimation for a single emissions source—pesticide usage in the SJV—for the sole purpose of "evaluat[ing] compliance with the 1994 SIP pesticide element for SJV."[48] Together with the calculation methodology in the Neal memorandum,[49] the annual inventory requirement in 3 CCR section 6452.4(a)(1), and the reporting and recordkeeping requirements in sections 6624 and 6626, it is the means for monitoring compliance of this emissions source (pesticide usage in the SJV) with its applicable emission limit of not more than 18.1 tons of VOC per day.

Under the CAA and EPA regulations, a wide range of data and means of collecting data qualify as methods to monitor compliance. CDPR's procedures for monitoring compliance with the 18.1 tpd emission limit for VOC emissions from pesticides in the SJV fall squarely within this range. See, for example, the definition of monitoring in EPA's compliance assurance monitoring regulations:

> [Compliance] Monitoring means any form of collecting data on a routine basis to determine or otherwise assess compliance with emission limitations or standards. Recordkeeping may be considered monitoring where such records are used to determine or assess compliance with an emission limitation or standard…. Monitoring may include one or more than one of the following data collection techniques, where appropriate for a particular circumstance…. (3) *Emission estimation and calculation procedures.*

40 CFR 64.1(emphasis added).

EPA considers the compliance monitoring associated with an emission limitation to be part of that limitation and, once incorporated into the SIP, enforceable under CAA sections 113 and 304. Therefore, including in the SIP the calculation procedures along with the requirements for an annual pesticide VOC emissions inventory report and recordkeeping and reporting by pesticide users (which collectively constitute the compliance monitoring procedures for the 18.1

[47] For further information on CAA-required inventories and their purposes, See EPA, Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations, EPA–454/R–05–001, November 2005, pp. 7-8.

[48] CDPR Revised SIP Commitment for the SJV, p. 2.

[49] Memorandum, Rosemary Neal, Ph.D., CDPR to Randy Segawa, CDPR, November 5, 2008; Subject: Update to the Pesticide Volatile Organic Inventory. Estimated Emissions 1990-2006, and Preliminary Estimates for 2007.

tpd emission limit) will make CDPR's revised commitment for the SJV fully enforceable under CAA sections 113 and 304.[50]

We also note that citizens seeking to enforce the revised commitment for the SJV under CAA section 304 are not restricted to using CDPR's inventory procedures or CDPR-generated inventories to demonstrate a violation. Under the CAA and EPA regulations, citizens may use any credible evidence of violation to enforce a SIP-approved emission limitation under CAA section 304. See CAA section 113, 40 CFR 51.212(c) and 40 CFR 52.12 and 52.30.[51]

Comment B-2: El Comité claims that the alleged inability of citizens to enforce the emission calculation methodology as a means to challenge a failure to adopt regulations would allow CDPR to change pesticide products' emission potentials and fumigant application methods' emission ratings in order to produce an inventory that "magically" complies with the constant tons per day target if the unchanged values would result in an emissions reduction shortfall in the SJV or Ventura County. They cite to a recent change that CDPR made to the 2010 inventory for SJV as support for this claim.

Response B-2: As discussed Response B-1, citizens may enforce the emission calculation methodology (because they will be the measure's approved compliance assurance monitoring provisions) as a means to challenge a failure to adopt regulations. Citizens may also use any credible evidence to enforce a SIP-approved emission limitation. Should CDPR make unsupported changes to emissions potentials and/or emissions ratings, a citizen could bring suit to enforce the emission limitation by arguing that, but for these unsupported changes, the inventory would have shown a violation.

El Comité alleges that a recent revision to the SJV 2010 inventory by CDPR is evidence that the Department can and will "produce an inventory that magically complies with the constant tons per day target."[52] El Comité, however, makes no specific allegations as to why this particular revision is evidence of CDPR inappropriately manipulating the inventory to show compliance with the tons per day limit. A review of cited email shows that CDPR fully documented the reason for the revision and that it was warranted by a significant error in the data

[50] Again, this also holds true for Ventura County although for Ventura County the calculation procedures are in section 6425.2(a)(1) and not the Neal memorandum.

[51] From the preamble to the credible evidence rule which promulgated these sections of the CFR:

> EPA, states and citizens will be able to use credible evidence to assess a source's compliance status and respond to noncompliance. This will help ensure that the government and citizens alike can respond to sources that are not complying with air pollutant emission standards on an ongoing basis, thus furthering the protection of public health and the environment.

[62] FR 8314, 8315 (February 2, 1997). This preamble has two examples of citizens successfully enforcing an emission limit based on creditable evidence. *Id*. at 8318.

[52] See El Comité letter, footnote 3, citing the email, Randy Segawa, CDPR to Brent Newell, May 17, 2012, Subject: Use and VOC emissions error for bifenthrin. See also, Revised 2010 Pesticide VOC Emissions Report, p. 15.

used to calculate the initial inventory.[53] We note in addition that even before this revision, the inventory showed compliance with the 18.1 tpd emission limit for the SJV. *Id*.

Comment B-3: El Comité states that EPA should include the Barry memorandum in the SIP because it contains the methods by which CDPR estimates the Method Use Fraction (MUF) and the Application Method Adjustment Factor (AMAF).

Response B-3: The Barry memorandum is a memorandum from Terrell Barry, Ph.D., *et al*., CDPR, to John Sanders, Ph.D., CDPR, September 29, 2007, Subject: Pesticide Volatile Organic Compound Emission Adjustments for Field Conditions and Estimated Volatile Organic Compound Reductions-Revised Estimates. It documents the process, data, and assumptions CDPR used to develop the historical MUF as well as currently-established AMAF. The memorandum does not contain any generic procedures for calculating historical MUF[54] or new AMAF and does not provide additional information or data that is not already in the Neal memorandum and/or the fumigant regulations. The Neal memorandum contains the same AMAF and MUF that are in the Barry memorandum.[55] Procedures for establishing new AMAF are now contained in the fumigant regulations at 3 CCR section 6452.4(a)(4). In 2008, CDPR started requiring the reporting of the fumigant application method on the PUR.[56] For inventory years 2008 and later, CDPR will use the data from the PUR and not calculated MUF to estimate VOC emissions from fumigants.[57]

Unlike the Neal memorandum, CDPR does not reference the Barry memorandum in either its revised SIP commitment for SJV or the fumigant regulations. As we stated in our proposal, we intend to include the Neal memorandum in the SIP and appreciate El Comité's reminder to do so.

For these reasons, EPA has determined that the Barry memorandum does not need to be incorporated into the California SIP.

[53] The revision affected emissions from one pesticide product, Fanfare 2EC, which contains the active ingredient, bifenthrin. As documented in its email, during a review of the inventory CDPR, with the assistance of the California Department of Food and Agriculture, found an error in the value used to convert gallons of FanFare 2EC used (as reported on the PUR) to pounds of product used, a step in the procedure for calculating the product's VOC emissions. This value, the product's density in pounds per gallon, was an improbably high 67.739 pounds (lb) per gallon. The correct density value for FanFare 2EC is 8.13 lb per gallon (which is listed on the product's material data sheet). A density of 67.7 lb per gallon is improbable because it would mean that a gallon of FanFare 2EC, which is mostly water, would weigh more than an equal volume of solid iron (65.5 pounds). By comparison, a gallon of water weighs 8.3 pounds. Density figures for iron and water from http://www.simetric.co.uk/siinfo.htm, values converted from kg/m^3 to lb/gallon.

[54] As we have discussed in Response B-1, now that the emission limits for SJV and Ventura County have been set at fixed numbers, neither the 1990 baseline inventories nor the data used to calculate them (including the historical MUF) have any current relevance to enforcing these emission limits.

[55] Neal memorandum, Table A1-1: Application Method Adjustment Factors (p. 23) and Tables A1-2 through A1-6: 1990 frequency of fumigation methods used (MUFs) (pp. 24-28).

[56] Section 6626(d).

[57] See section 6452.4(a)(1): "Fumigant product emissions will be the summation of the pounds of each pesticide product used multiplied by the emission potential for that specific product and VOC emissions rating for the application method as specified in section 6452.4(5)."

Comment B-4: El Comité claims that EPA proposes to find that the revised SIP commitment for the SJV is enforceable based on the Neal memorandum, citing to the proposed rule at 77 FR 24441, 24444. It then claims that EPA contradicts itself by stating the SIP revision is unenforceable because it does not commit to specific measures to ensure that the 18.1 tpd limit is not exceeded, citing to the proposed rule at 77 FR 24441, 24450.

Response B-4: We did not propose to find that the revised commitment for the SJV is enforceable based solely on the Neal memorandum. In the proposal, we cite not only to the Neal memorandum but also to several other provisions in CDPR's submitted regulations[58] and to the fumigant application method regulations to find that the 18.1 tpd emission limit for the SJV is enforceable:

> These [compliance monitoring] provisions are clear and adequate *in combination with the fumigant regulations* to ensure the pesticide VOC limit for the SJV is enforceable as required by CAA section 110(a)(2)(A).

77 FR 24441, 24444 (emphasis added).

This statement is consistent with the one later in the proposal that El Comité claims contradicts it:

> Considered in isolation, the revised commitment for San Joaquin Valley changes the form of the commitment in the 1994 Pesticide Element for the SJV but does not represent an enforceable measure for SIP purposes. However, *when viewed in light of the CDPR's regulations, the combination of the commitment and fumigant regulations* does meet the minimum requirements for enforceability of SIP measures and reasonably ensures that the 12 percent emissions reduction target from the 1994 Pesticide Element would be achieved in San Joaquin Valley.

77 FR 24441, 24450 (emphasis added).

Comment B-5: El Comité argues that EPA's proposal to approve the revised commitment for SJV as enforceable conflicts with the Ninth Circuit's decision in *El Comité para el Bienestar de Earlimart* v. *Warmerdam*, 539 F.3d 1062 (9th Cir. 2008) (*Warmerdam*). They assert that in this decision, the Ninth Circuit did not allow citizens to "bootstrap" arguments of inventory manipulation to enforce a commitment to adopt regulations. *Warmerdam*, 539 F. 3d at 1072-73. According to El Comité, a plaintiff attempting to enforce the revised SIP commitment would face the same argument made in *Warmerdam*: "we get to decide how and whether we met the commitment and there is nothing you can do about it." El Comité argues that the CAA does not allow discretionary commitment and that EPA should not approve "CDPR's and CARB's latest attempt to achieve a reduction goal based on discretionary actions."

Response B-5: Our finding that the revised commitment for SJV is enforceable does not conflict with *Warmerdam*. In *Warmerdam*, the Ninth Circuit ruled that the baseline inventory could not be turned into an enforceable emission limitation by "bootstrapping it to the commitment to adopt regulations." While the court "acknowledged that the baseline was a critical foundation," it

[58] These other provisions included the annual emissions inventory requirements in section 6452.4; the emissions inventory calculation methodology in section 6452.4(a)(1) and recordkeeping and reporting requirements for pesticide users in sections 6624 and 6626. We are approving each of these provisions into the California SIP.

found that this did not "change [the court's] view that neither the baseline nor the methodology qualify as independently enforceable aspects of the SIP." *Warmerdam*, 539 F. 3d at 1072-73.

As explained in Response B-1., except for the analysis required by CAA section 110(l), the SJV baseline (that is, the 1990 baseline used to calculate the required level of emissions reductions) no longer has a purpose now that the State has set the maximum level of pesticide VOC emissions allowed in the SJV at a fixed 18.1 tpd. Once that limitation is incorporated into the SIP, the 1990 baseline inventory will be of historical interest only and neither it nor the calculation procedures used for it need to be enforceable in the future. We note that this will also be true for the 1990 baseline inventory for Ventura County once we approve the fumigant regulations.

CDPR's revised SIP commitment for the SJV is not a discretionary commitment. As discussed above and in the proposal for this action, the commitment, including the fixed 18.1 tpd limitation on pesticide VOC emissions in the SJV, the monitoring procedures necessary to determine compliance with it and the fumigant regulations combine to be a fully enforceable program under the CAA once approved into the SIP.

No citation is given for the quote included in this comment, so we are unable to determine whether this is an accurate statement of California's position or El Comité's interpretation of California's position and, therefore, cannot respond. As discussed above, we find that the compliance monitoring requirements for the commitment are fully enforceable. We also note again that citizens may use any credible evidence to enforce the commitment and are not restricted to using inventories generated by the State.

Comment B-6: El Comité argues that the revised commitment by CDPR to manage pesticides emissions in the SJV is unenforceable because it is impractical to determine whether emissions levels are exceeded because inventories are only available 2 years after the fact. They further argue that the emission controls should constantly limit pesticide VOC emissions and "not lag two years behind." To support these arguments, El Comité cites to the discussion of the fundamental principles for SIPs and control strategies found in the General Preamble at 13567-13568,[59] noting in particular the second principle relating to enforceable measures. They also cite to the General Preamble's discussion of enforceability of SIP regulations at 13502.

Response B-6: El Comité confuses two requirements: the requirement that an emission limitation assures continuous emissions reductions[60] and the requirement for a practical means of determining compliance with that emission limitation. The cited sections of the General Preamble all address the latter requirement. CDPR's revised SIP commitment for the SJV meets the criteria for enforceability as given in the General Preamble. However, before we discuss this, we will first address the commenters' concern about continuous emissions reductions.

[59] The "General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990," published at 57 FR 13498 on April 16, 1992, describes EPA's preliminary view on how we would interpret various SIP planning provisions in title I of the CAA as amended in 1990, including those planning provisions applicable to the 1-hour ozone standard. EPA continues to rely on certain guidance in the General Preamble to implement the 8-hour ozone standard under title I.

[60] See, for example, CAA section 302(k): The terms "emission limitation" and "emission standard" mean a requirement…which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis….

We cannot consider the 18.1 tpd emission limit for the SJV as unrelated to the fumigant regulations. Not only do the fumigant regulations contain the reporting and recordkeeping requirements necessary for monitoring compliance with the limit, they also contain the principal control requirements for maintaining pesticide VOC emissions in the SJV under that limit. CDPR considers the 1.5 tpd in emissions reductions from the application method restrictions in the fumigant regulations to be sufficient to meet the SJV limit in a typical year.[61] These restrictions apply throughout the May 1 to October 30 regulatory season and thus provide for continuous emissions reductions during that season.

El Comité cites two separate discussions of enforceability criteria in the General Preamble. As noted above, these criteria address the practical enforceability of a measure or limit; that is, whether it is possible to determine whether a source is in compliance with that measure or limit. We have evaluated CDPR's commitment against each section criteria as discussed below. In this discussion, we do not consider the portion of CDPR's commitment that provides for implementing restrictions on fumigant application methods. This portion is now moot because CDPR has already adopted and submitted—and we are approving in this rule—the regulations needed to meet it.

The General Preamble at 13567-13568 discusses several fundamental principles for SIPs and control strategies. The second principle is that measures in the SIP must be enforceable and to be enforceable, measures should have the following characteristics:

1. The measure is duly adopted and specifies clear, unambiguous, and measurable requirements.

    - CDPR adopted the revised SIP commitment for the SJV following state rulemaking procedures and the CAA's requirements for public hearing. The commitment is consistent with the Department's statutory authorities. See CDPR revised SIP commitment for SJV, p. 1.

    - It describes clearly and unambiguously the requirement for CDPR to manage VOC emissions from commercial structural and agricultural pesticide use, to ensure that they do not exceed 18.1 tpd in the SJV area." See, CDPR Revised SIP commitment for the SJV, p. 2.

    - The limitation is measurable using compliance monitoring procedures spelled out in the commitment and in the accompanying duly-adopted fumigant regulations. CDPR has demonstrated that VOC emissions from pesticide use in the SJV are indeed measurable by having developed and published over the last several years annual emissions inventory reports documenting these emissions. See Exhibits 5-14 of the El Comité letter. It also specifies a clear, unambiguous, and measurable requirement for CDPR to implement restrictions on VOC emissions from non-fumigant pesticides. ("Measureable" here means that it is easily determined if CDPR has adopted regulations that implement restrictions on VOC emissions from non-fumigant pesticides.)

2. There exist a legal means for ensuring compliance for the measure.

    - Once approved into the SIP, both the commitment to manage pesticide VOC emissions to ensure they do not exceed 18.1 tpd in the SJV area and the commitment to implement

[61] CDPR, Staff Report on the Department of Pesticide Regulation's Proposed SIP Commitment for San Joaquin Valley, ("CDPR staff report"), p. 4.

restrictions on VOC emissions from non-fumigant pesticides become enforceable by EPA under CAA section 113 and by citizens under CAA section 304. EPA may also enforce the commitment through a finding of failure to implement under CAA section 179(a)(4). A finding of failure to implement initiates sanctions clocks under the same section.

3. There is a practical method to determine compliance with the measure.

   - As described in Responses B-1 and 2, the commitment to limit VOC emissions from pesticide in the SJV is accompanied by enforceable compliance monitoring procedures (including those in the fumigant regulation) which we are approving into the SIP. CDPR has proven that it is practicable to determine compliance with the limitation by developing and publishing numerous annual emissions inventory reports. See Exhibits 5-14 of the El Comité letter. CDPR provides current information on its regulatory program, including its progress in adopting regulations to restrict VOC emissions from non-fumigants in the SJV on its website at http://www.cdpr.ca.gov/docs/legbills/rulepkgs.htm.

The second section of the General Preamble (p. 13502) cited by the commenter addresses the enforceability of SIP regulations (specifically RACT rules under CAA sections 182(a)(2)(A) and 182(b)(2)) rather than SIP commitments. However, CDPR's revised SIP commitment for the SJV also meets the standards for enforceability listed here. These standards are that a SIP regulation must clearly state:

1. The sources or source types that are subject to its requirements.

   - For the 18.1 tpd emission limit, the sources subject to the limitation are commercial and structural pesticide usage in the SJV.[62] For the commitment for non-fumigants, the sources subject to the commitment are non-fumigant pesticide usage in the SJV.

2. The control requirements.

   - For the 18.1 tpd emission limit, the control requirement is to manage VOC emissions from commercial and structural pesticide use in the SJV from pesticide to ensure they do not exceed 18.1 tpd in the SJV area. For the commitment for non-fumigants, the control requirement is to implement restrictions on VOC emissions from non-fumigant pesticides in the SJV by 2014.

3. The time frames within which these requirements must be met.

   - For the 18.1 tpd emission limit, the time period is defined by the period required to be inventoried, which is May 1 to October 31 of each year. See Neal memorandum, p. 3. The limitation is currently in effect under the approved 1994 Pesticide Element. For the commitment for non-fumigants, implementation is required by 2014. See Revised SIP commitment for the SJV, p. 1.

4. Recordkeeping and monitoring requirements appropriate to the type of sources being regulated and sufficient to allow determinations on a continuing basis whether sources are complying. An SIP regulation must also contain test procedures in order to determine whether sources are in compliance.

[62] From the Revised SIP commitment for SJV, p. 2: CDPR commitments "to manage VOC emissions from commercial structural and agricultural pesticide use, to ensure that they do not exceed 18.1 tons-per-day in the SJV area."

- For the 18.1 tpd emission limit, recordkeeping and monitoring requirements are defined by the Neal memorandum, the requirement for CDPR to prepare and provide to the public the annual emissions inventory report in 3 CCR section 6452.4 and recordkeeping and reporting requirements for pesticide users in sections 6624 and 6626. All these provisions are being approved into the SIP in this rule. "Test procedures" in this instance are the inventory calculation methodologies contained in the Neal memorandum and the emissions inventory calculation methodology in section 6452.4(a)(1).

  For the commitment for non-fumigants, CDPR's compliance with this commitment can be monitored through its website at http://www.cdpr.ca.gov/docs/legbills/ rulepkgs.htm. We note that CDPR has already proposed these regulations.[63] The regulation adopted to meet this commitment will need to include appropriate recordkeeping, monitoring, and testing requirements.

As a practical matter, CDPR produces the inventories as soon as practicable given the size and complexity of the source at hand (pesticide usage in the SJV), the sheer amount of data that must be evaluated, and the requirement in section 6452.4(b) that the public be given 45 days to comment on the draft inventories.

For Ventura County, should the annual pesticide VOC emissions inventory report show that the difference between emissions in the annual VOC emissions inventory report and the 3 tpd limit for the area is five percent or less of the limit or exceeds the limit, the regulations' provisions in sections 6452.2 and 6452.3 go into place. These provisions require CDPR to establish a separate VOC emission limit for fumigants and require the county agricultural commissioner to take certain steps to assure that VOC emissions from fumigants do not exceed this fumigant VOC emission limit. These additional provisions must stay in place for a minimum of two seasons and continue until pesticide VOC levels in the area are no longer predicted to exceed the limit.[64]

Comment B-7: El Comité argues that the revised commitment by CDPR to manage pesticides emissions in the SJV is not enforceable because the SIP revision does not commit CDPR or CARB to adopt any specific regulations to achieve SJV pesticide VOC emission limit. They argue that under the terms of the SIP revision, the emission limit "commitment" is not an enforceable commitment but rather a goal to cap emissions. They again assert that EPA conceded that the SIP revision is not enforceable in its proposed rule, citing EPA's statement at 77 FR 24441, 24450.

Response B-7: CDPR has already adopted regulations to manage pesticide VOC emissions in the SJV. We are approving these regulations today. CDPR has also committed to adopted restrictions on VOC emissions from non-fumigant pesticides, which have already been proposed

[63] CDPR, Volatile Organic Compounds in the San Joaquin Valley Ozone Nonattainment Area, DPR Regulation No. 12-001, Notice of Proposed Regulatory Action and Notice of Public Hearing on a Proposed Ozone State Implementation Plan Amendment Regarding Pesticide Emissions in the San Joaquin Valley Nonattainment Area, April 20, 2012.

[64] 3 CCR section 6452.2. CDPR has similar regulatory provisions for SJV, South Coast, SED, and Sacramento, at the State level. It did not submit these provisions as a SIP revision because it found that only in Ventura County would excess VOC emissions from fumigants be likely lead to an exceedance of total pesticide VOC emission limit.

for adoption. See footnote 63. For reasons described in Response B-6, this commitment is enforceable.

We have already discussed the enforceability of the commitment to limit VOC emissions from commercial structural and agricultural pesticides to 18.1 tpd in combination with the fumigant regulations in Responses B-1, B-2, and B-6.

Finally, we did not concede in the proposed rule that the revised SIP commitment for SJV revision is unenforceable. We stated that *when considered in isolation*, the revised commitment does not represent an enforceable measure for SIP purposes; however, we are not acting on the commitment in isolation. As we stated in the proposal and have discussed above, the combination of the commitment and fumigant regulations does meet the minimum requirements for enforceability of SIP measures. See 77 FR 24441, 24450.

C. Approval of the Revised Pesticide Element for SJV under CAA Section 110(l)

Comment C-1: El Comité comments that the commitment in the existing 1994 Pesticide Element is both a tonnage commitment in an areas' attainment year and a percentage commitment: 13 tons per day reduction by 1999 and 20 percent reduction from 1990 by 2005 in the SJV.

Response C-1: We agree that the commitment in the 1994 Pesticide Element[65] is both a percentage commitment and a tonnage commitment, and we agree that the ton per day reduction called for in the Element is 13 tpd. Where EPA disagrees with El Comité is that we have concluded that the percentage commitment corresponds to the tonnage commitment in that they both relate directly to the attainment needs of SJV in achieving the 1-hour ozone standard by 1999 as anticipated by the State of California in 1994 and 1996 in developing the California Ozone SIP, and approved by EPA in 1997 when EPA approved that plan.

We explained the basis for our conclusion in this regard on pages 24446-24447 of the proposed rule. First, we note that the Boyd Letter,[66] while clarifying certain other aspects of the Pesticide Element, introduced an ambiguity in the percentage commitment for SJV by stating, in the same paragraph, that the commitment in each SIP area (which in this context presumably

[65] As these terms are used in this preamble, the "1994 Pesticide SIP" is the State Implementation Plan for Agricultural and Commercial Structural Pesticides, November 15, 1994 which was submitted as part of the 1994 California State Implementation Plan for Ozone ("1994 California Ozone SIP"). The 1994 Pesticide SIP is incorporated at 40 CFR 52.220(c)(204)(i)(A)(6). The 1994 California Ozone SIP was approved at 62 FR 1150 (January 8, 1997). The "Boyd Letter" is the letter from James Boyd, CARB's Executive Officer to David Howekamp, Air and Toxics Division Director, EPA Region 9, June 13, 1996. This letter and its appendices are incorporated at 40 CFR 52.220(c) (236).The 1994 Pesticide SIP and the Boyd Letter collectively constitute the "1994 Pesticide Element."

[66] El Comité recommends that we refer to the "Boyd letter" as the "Howekamp Letter" because the courts in *Warmerdam* and *AIR* used this convention and being consistent with the courts would "ensure clarity and eliminate confusion should the Ninth Circuit review this rulemaking." In previous rule actions and in our proposal for today's action, we have consistently referred to this letter as the "Boyd Letter" See, *e.g.,* 73 FR 41277, 41281 (July 18, 2008) and 77 FR 24441, 24446. In addition, the convention we find more useful in referring to letters, where a person's name is used, is to use the name of the author of a letter, not the recipient. So, we continue to refer to this letter as the "Boyd Letter" in this document.

includes SJV) is for a 20 percent reduction from 1990 to 2005 and that the credit taken in SJV is 12 percent.

To resolve this ambiguity, EPA is taking into account the words of the 1994 Pesticide Element itself and the words of EPA's final rule approving the 1994 California Ozone SIP, including this Element.

First, the 1994 Pesticide SIP committed CDPR to a "maximum of 20 percent" reduction in pesticide VOC emissions from 1990 baseline levels in areas "which reference VOC reductions" from the element in their plans. See 1994 Pesticide SIP, p.1. In the case of SJV, the "plan" that references VOC reductions from the Pesticide Element is the attainment demonstration plan for SJV in the 1994 California Ozone SIP, and it took credit for a 12 percent (not a 20 percent) reduction in baseline emissions from 1990.

Second, the Pesticide SIP states: "The plan offers the flexibility to achieve reductions of less than 20 percent by the year 2005 in air districts if less pesticide VOC emission reductions are needed." *Id*. At the time when the 1994 California Ozone SIP was adopted and approved, the applicable attainment date for SJV was 1999, and the 1994 California Ozone SIP, as ultimately approved, took credit for only a 12 percent reduction in pesticide VOC emission in that area because that was all that the attainment demonstration at the time called for from that source category. By its terms, the 1994 Pesticide SIP was developed specifically to be flexible enough to provide for a less-than-20 percent reduction in areas that did not need the full 20 percent to meet attainment needs.

Third, in EPA's final rule approving the 1994 California Ozone SIP (and related 1994 Pesticide Element), we summarized our understanding of the emissions reduction commitments in the Pesticide Element as follows: "As described in the SIP, California has committed to adopt and submit to U.S. EPA by June 15, 1997, any regulations necessary to reduce VOC emissions from agricultural and commercial structural pesticides by 20 percent of the 1990 base year emissions in the attainment years for Sacramento, Ventura, Southeast Desert, and the South Coast, and *by 12 percent in 1999 for the San Joaquin Valley*." (emphasis added) See 62 FR at 1150, at 1170(January 8, 1997). Therefore, in view of the overall design and purpose of the 1994 Pesticide Element and EPA's understanding of the commitments in the Element at the time of the approval of the Element into the California SIP, we have concluded that the existing, approved Pesticide Element includes a 12 percent emissions reduction commitment in SJV, not a 20 percent emissions reduction commitment.

Comment C-2: El Comité comments that CDPR's own statements prior to the onset of litigation reveal that agency's belief that the commitment for SJV under the Pesticide Element is for a 20 percent emissions reduction from pesticidal VOC emissions. EPA's statements too in connection with approval of the revised Pesticide Element for Ventura County highlight a 20 percent commitment.

Response C-2: With respect to CDPR's own statements, El Comité refers to a CDPR Workshop Document and CDPR inventory memoranda, which are attached to El Comité's comment letter, prior to 2005 (when El Comité brought suit against the State of California to enforce aspects of the Pesticide Element). We have reviewed the documents attached to El Comité's letter and confirm that they refer to a goal of 20 percent emissions reduction in SJV. The Pesticide Element

itself refers to the same general goal of reducing pesticidal VOC emissions by 20 percent from the 1990 baseline to the year 2005.

However, as further discussed above in Response C-1, other language in the Pesticide Element, together with the Boyd letter, converted the 20 percent aspirational goal set forth in the Pesticide Element into definitive 20 percent emissions reduction commitments (and associated tonnage reduction commitments) in four California ozone nonattainment areas and a definitive 12 percent commitment in SJV, based on the needs of the attainment demonstrations for these areas at the time. Such an interpretation is further supported by EPA's statements at the time of approval of the Pesticide Element (as clarified by the Boyd letter) in 1997.

Furthermore, the inconsistent descriptions by CDPR of the commitment for SJV is not surprising given that the Boyd letter, which links the commitments to the attainment needs of the nonattainment areas was not authored by CDPR, but by CARB, and given the mistaken impression by various parties, including EPA, concerning the approval status of the Wells Memorandum in the SIP.[67] Thus, in summary, we view the post-approval statements to carry much less weight in interpreting the Pesticide Element than the language of the Pesticide Element itself, the Boyd letter, and EPA's language in approving those two items as part of the California SIP.

As to El Comité's reference to EPA statements referring to a 20 percent commitment in the rulemaking approving the revised Pesticide Element for Ventura County, we note that EPA's statements were made specifically in regards to the commitment for Ventura County, which unambiguously is 20 percent. EPA statements in the context of a rulemaking on the Pesticide Element SIP Revision for Ventura County therefore do not speak to the emissions reduction commitment in the Pesticide Element for SJV.

Comment C-3: El Comité comments that the plain language of the 1994 Pesticide SIP and the [Boyd] Letter together commit to achieve a 20 percent reduction of pesticide VOC from 1990 levels by 2005, and EPA's approval of the revised SIP commitment for SJV will violate section 110(l) because CDPR and CARB have failed to demonstrate the change in the commitment to 12 percent will not interfere with attainment, reasonable further progress (RFP), or any other requirements of the CAA. They also comment that EPA's finding that the existing commitment is for 12 percent (rather than 20 percent) and that, as a result, approval of the revised SIP commitment for SJV would not violate section 110(l), has no basis in the plain language of the SIP, and is contrary to the Ninth Circuit's decision in *Safe Air for Everyone v. EPA*, 488 F.3d 1088 (9th Cir. 2007).

Response C-3: As discussed in detail in Response C-1, EPA believes that the SIP commitment in the 1994 Pesticide SIP (as modified by the Boyd Letter) for SJV is ambiguous and thus subject to interpretation. We have interpreted the 1994 Pesticide SIP and Boyd Letter, in light of the language of both and do not find any one sentence of either document to be a definitive statement as to the commitment in SJV. Rather, in light of CDPR's stated purposes and design of the 1994 Pesticide Element itself, and the reliance on it by California in demonstrating attainment of the SJV by 1999 with respect to the 1-hour ozone standard, we have concluded that, consistent with EPA's language in approving the 1994 Pesticide Element, that the

[67] We note here that EPA could not have listed the Wells Memorandum as part of the SIP in 1997 without amendment by California given California's request to delete the milestone-year commitments contained therein.

commitment is a 12 percent commitment in SJV. Thus, we do not view our approval of the revised SIP commitment for SJV as a relaxation in the California SIP because it would result in the same emissions reductions as would result under the existing approved California SIP Pesticide Element.

Our conclusion in this regard is not contrary to the Ninth Circuit's decision in the *Safe Air* case cited by El Comité. As noted by El Comité, in *Safe Air*, the Ninth Circuit held that the content of a SIP is based on its "plain meaning when such a meaning is apparent, not absurd, and not contradicted by the manifest intent of EPA, as expressed in the promulgating documents available to the public." *Safe Air for Everyone v. EPA*, 488 F.3d 1088, at 1100 (9th Cir. 2007). In this instance, the meaning of the 1994 Pesticide Element's percent reduction SIP commitment for SJV is not "plain," and even if it were, it is "contradicted by the manifest intent of EPA, as expressed in the promulgating document available to the public," i.e., EPA's 1997 final rule approving the 1994 Pesticide Element into the California SIP. Thus, EPA's interpretation of the Element's percent reduction SIP commitment SJV in the context of this rulemaking is consistent with the Ninth Circuit's decision in *Safe Air* and consistent with EPA's stated interpretation in 1997 of this same commitment.

To the extent that El Comité is asserting that our approval of the revised SIP commitment for SJV is prohibited by CAA section 110(l) because it represents a relaxation of the SIP, we note that a relaxation of the SIP (*i.e.*, backsliding) is not by itself prohibited by CAA section 110(l). This CAA section requires a broader enquiry into the effect of such a relaxation on other provisions of the SIP and a determination as to whether the relaxation adversely affects the SIP's compliance with other CAA requirements. El Comité does not provide any evidence that this claimed relaxation of the Pesticide Element for SJV would interfere with the California SIP's compliance with other CAA requirements.

To the extent that El Comité also asserts that our approval of the revised SIP commitment for SJV is prohibited by CAA section 110(l) because neither CDPR nor CARB provided a demonstration that the changed commitment does not interfere with existing SIP, we note that approval of SIP revisions is not barred by section 110(l) solely on the basis of a state failing to accompany the SIP revision with a demonstration of non-interference. Section 110(l) places an affirmative duty on EPA and not on the states to make this determination. States, however, must provide sufficient information in their SIP submissions for EPA to determine compliance with section 110(l) or risk a finding of incompleteness under CAA section 110(k)(1) or disapproval under section 110(l).

As to CAA section 110(l), relative to California's and EPA's interpretation of the Pesticide Element to require a 12 percent reduction in pesticide VOC emissions in SJV (rather than 20 percent) from a 1990 baseline, we have concluded that the revised SIP commitment for SJV would result in, at a minimum, the same emissions reductions that are currently required under the approved SIP, and neither the approved 8-hour ozone plan nor the approved $PM_{2.5}$ plan for SJV rely on emissions reductions due to the Pesticide Element. As such, we have also concluded, as we did for the proposed rule, that our approvals of the fumigant regulations and revised SIP commitment for SJV will not interfere with attainment and RFP or any other applicable requirement of the CAA and thus comply with the requirements of CAA section 110(l). See 77 FR 24441, at 24447.

We note that CARB and CDPR did evaluate the effect of changing the reduction target for SJV from 20 percent to 12 percent on the RFP and attainment demonstrations for the 1997 8-hour ozone NAAQS in the submitted (but not yet approved) 2007 SJV Ozone Plan and 2007 State Strategy.[68] In its initial November 2007 submittal of the 2007 State Strategy, California had included a CDPR's SIP commitment for a 20 percent reduction off a 1991 baseline inventory in the SJV as interpreted by a U.S. District Court decision. See *El Comité para El Bienestar De Earlimart v. Helliker*, 416 F. Supp. 2d 912 (E.D. Cal. 2006). After the Ninth Circuit reversed this decision in *Warmerdam,* CDPR revised its commitment for SJV to reflect a 12 percent reduction off a 1990 baseline and CARB submitted this revised commitment and withdrew the previous commitment in October 2009. We are approving the revised commitment in this action. In their evaluation, CDPR and CARB estimated that revising the SIP commitment for SJV could potentially result in up to 2.3 tpd in additional pesticide VOC emissions, but also concluded that this potential increase would not interfere with the submitted RFP and attainment demonstrations in the 2007 SJV Ozone Plan. See CDPR staff report, p. 4 and of E.O. S-09-005, p. 3.

Comment C-4: El Comité asserts that EPA has never approved PEST-1 as it relates to the SJV and cannot now claim that the approved SIP for the Valley includes a 12 percent reduction. Even if EPA had approved PEST-1 for the SJV, it does not change the original 20 percent commitment for SJV. EPA has never approved the CARB staff report[69] cited at footnote 24 in the April 24, 2012 proposed rule and cannot claim that approval of the CARB staff report changes the Valley's commitment to 12 percent.

Response C-4: In approving the remnants of the 2003 State Strategy that had not been withdrawn by CARB and the 2003 South Coast Air Quality Management Plan (AQMP) at 74 FR 10176 (March 10, 2012), EPA approved PEST-1 as part of the California SIP. PEST-1 was not written to apply only to the South Coast but was intended to continue (unchanged) the existing Pesticide Element that was approved by EPA in 1997.

In our April 24, 2012 proposed rule, we mistakenly stated that, after approval of PEST-1, we "have not approved any other changes to the SJV-related provisions of 1994 Pesticide Element," implying that our approval of PEST-1 did in fact change the SJV-related provisions of the 1994 Pesticide Element. This is not correct. The approval of PEST-1 changed nothing, but continued the commitments contained in the existing Pesticide Element (as clarified by the Boyd Letter) in the various nonattainment areas, including SJV. In other words, we do not believe approval of PEST-1 changed the percent commitment from 20 percent to 12 percent; rather, we believe it simply brought forward the existing 12 percent commitment.

As to the CARB staff report cited in footnote 24 of the April 24, 2012 proposed rule, we do not claim that the CARB staff report changes the Valley's commitment to 12 percent, but rather we believe it simply describes the commitment as approved by EPA in 1997.

Comment C-6: El Comité comments that an approval of the revised SIP revision would violate CAA section 110(l) because neither CDPR nor CARB has demonstrated that the SIP revision does not backslide when it changes the manner by which the 1990 baseline inventory is

[68] See CDPR staff report, p. 4 and CARB Executive Order (E.O.) S-09-005, October 12, 2009, p. 2.

[69] CARB, Staff Report, Proposed 2004 State Implementation Plan for Ozone in the San Joaquin Valley, Release Date: September 28, 2004 ("CARB staff report"). CARB's interpretation of PEST-1 as it relates to the SJV 2004 1-Hour Ozone Plan is given on page 27.

calculated. They contend that the 1994 Pesticide Element committed CDPR to using the 1991 PUR data to estimate the 1990 baseline inventory because "such data is more accurate than 1990 PUR data." Finally, El Comité comments that EPA did not consider the change in PUR data on the 1990 baseline inventory and whether that change reduces the actual tonnage commitment (in 1994 SIP currency) or allows a higher level of pesticide VOC emissions.

Response C-6: CAA section 110(l) does not prohibit any backsliding and does not bar approval of a SIP revision based solely on a state's failure to accompany the revision with a demonstration of non-interference. Section 110(l) only prohibits backsliding that would interfere with any applicable requirement of the CAA.

As stated above, we have concluded that the emissions reduction commitment in SJV under the existing SIP is 12 percent from 1990 levels, not 20 percent, and thus, the establishment of an 18.1 tpd limit (which represents a 12 percent reduction from 1990) through this SIP revision would result in the same emissions reductions from pesticide VOC emissions as required under the existing SIP.

We reviewed the language of the existing Pesticide SIP itself to see whether it could be reasonably interpreted to allow for use of 1990 PUR data, rather than 1991 PUR data, to determine whether the establishment of the 18.1 tpd limit (determined using 1990 PUR data) represents a revision to the SIP that would result in an emissions impact. If the existing SIP could be reasonably interpreted to allow for use of 1990 PUR data, then no emission impact would result.

The 1994 Pesticide SIP requires that a 1990 baseline inventory be used to determine the level of emissions reductions needed: "This plan is designed to reduce volatile organic compound (VOC) emissions from agricultural and commercial structural pesticide applications by a maximum of 20 percent from the 1990 baseline …." p. 1. The SIP is clear that this 1990 baseline inventory is to represent conditions in *1990*:

> "The base year inventory will be created from the 1991 Pesticide Use Report and then *adjusted by a factor to represent the 1990 base year*." p. 5;
>
> "In cooperation with DPR, [CARB] will develop a baseline inventory of estimated 1990 pesticidal VOC emissions based on 1991 pesticide use data, *adjusted to represent the 1990 base year*." p. 6;
>
> "The baseline inventory will be calculated by summing *the estimated 1990 emissions* of each agricultural and commercial structural use pesticide." p. 6;
>
> "[Estimated 1990 e]missions will be calculated by multiplying the VOC Emissions Factor value for each product by *the adjusted use of that product in 1990*." p. 5.

(emphasis added to all).

The 1994 Pesticide SIP also emphasizes the use of the best available information to calculate the inventory, including in the rationale for using the 1991 PUR data in lieu of the 1990 data. It also allows (on page 6) for "further adjust[ments] by additional VOC Emission Factors if additional information becomes available." While this statement applies to VOC emission factors, it would be counter-intuitive to limit adjustments to just this type of data if the primary interest is to produce the best possible assessment of pesticide VOC emissions in the 1990 base year.

In the 1994 Pesticide SIP (page 5), CDPR stated it would use the 1991 PUR data (backcasted to represent 1990) as the starting point for calculating the 1990 baseline inventory because "[i]t is believed that the 1991 pesticide use report would be a more accurate source to determine 1990 pesticidal VOC emissions." CDPR did not concede that the 1991 PUR data was more accurate and thus left open the option to use 1990 PUR data to calculate the 1990 baseline inventory if that data was determined to be more or similarly accurate. CDPR would later determine that the data for the two years was in fact of similar accuracy. This determination weakens any reading that the SIP mandates the use of the 1991 PUR data, given the SIP's emphasis on the 1990 baseline inventory reflecting 1990 conditions and on the use of the best available data.[70]

El Comité also comments that EPA did not consider the change in PUR data on the 1990 baseline inventory and whether that change reduces the actual tonnage commitment or allows a higher level of pesticide VOC emissions. We believe that El Comité here is referring to the 1990 baseline pesticide VOC inventory and 13 tpd (in 1994 Ozone SIP currency) pesticide VOC reduction for the SJV that were approved as part of the 1994 Ozone SIP. The 1990 baseline pesticide VOC inventory in the1994 Ozone SIP was not derived from PUR data, so any change to PUR data would not affect it, the tonnage reductions derived from it, or increase the level of pesticide emissions allowed. We are not revising the 1990 baseline inventory or the 13 tpd credit (in 1994 SIP currency) that we approved as part of the 1994 Ozone SIP in January 1997.

Finally, we observe that the use of unbackcasted 1991 PUR data to calculate the baseline inventory results in a *1991* baseline inventory. Using a 1991 baseline inventory to set SJV's (or any area's) pesticide VOC emission limit, as El Comité advocates, would conflict with the plain language of the 1994 Pesticide SIP which indisputably requires that these emission limits be set from a *1990* baseline.

For these reasons, we conclude that the existing Pesticide Element *does* allow for the use of 1990 PUR data to determine 1990 baseline emissions, and thus, the establishment of an 18.1 tpd emission limit in the Valley that derives from 1990 PUR does not represent a revision to the SIP that results in higher emissions than would be allowed under the existing Pesticide Element.

For the purposes of this response, we have investigated further the possibility that unbackcasted 1991 PUR data is required under the existing SIP and that use of 1990 PUR data would result in a higher limit than one resulting from the use of unbackcasted 1991 PUR data to establish baseline 1990 emissions. To do this, we used information in the CDPR staff report to isolate the potential emissions impact of using 1990 PUR data rather than unbackcasted 1991 PUR data and determined that the calculated difference would be 0.7 tpd.[71] In other words, if

[70] This determination of similar accuracy also effectively makes the issue of the 1991 PUR data moot. Even if we read the1994 Pesticide SIP to mandate the use of 1991 PUR data, we would also have to read it to mandate that this data be adjusted to represent 1990. The SIP does not say what information would be used to make this adjustment; however, given that CDPR has on hand reasonably accurate data on the use of each product in 1990 (i.e., the 1990 PUR data), it would be arbitrary for it not to rely on the 1990 PUR data (either directly or to adjusted the 1991 PUR data to reflect 1990) in its calculation of the 1990 baseline. Hence, whether or not we start with the premise that the 1994 Pesticide SIP required the use of the 1991 PUR data, we end up in the same place: the 1990 baseline inventory would be calculated using the 1990 PUR data.

[71] CDPR staff report, p. 4. The 0.7 tpd is calculated as 88 percent of 20.6 tpd minus 88 percent of 19.8 tpd. The value of 20.6 tpd represents 1990 baseline emissions estimated using 1990 PUR data and 19.8 tpd represents 1991 baseline emissions estimated using unbackcasted 1991 PUR data.

unbackcasted 1991 PUR data were required to be used in connection with establishing baseline 1990 emissions from agricultural and commercial structural applications, then, based on CDPR's data in the CDPR staff report, the corresponding limit in SJV (ensuring a 12 percent reduction) would be 17.4 tpd, 0.7 tpd lower than the 18.1 tpd limit developed using 1990 PUR data.

Alternatively, based on this analysis, we find that, even if the existing SIP required the use of unbackcasted 1991 PUR data to calculate the baseline and the use of the 1990 PUR data represented a revision to the SIP, we find that the potential emissions impact (0.7 ton per day of VOC higher limit) would not interfere with RFP or attainment of the NAAQS, for the following reasons.[72] As to ozone, we note that the approved 1997 8-hour ozone plan for SJV shows how the plan provides for VOC and NO_x reductions that surpass RFP requirements and provides for expeditious attainment even without considering any VOC reductions from pesticides. See 76 FR 57846, 57861 and 57858 (September 16, 2011) and 77 FR 12652 (March 1, 2012). The SJV area has recently been designated as "extreme" nonattainment for the 2008 8-hour ozone NAAQS, but the nonattainment plan for that standard is not due until 2015. See 77 FR 30088 (May 21, 2012) and 40 CFR 51.908.

As to particulate matter (PM), we reiterate our observation from the April 24, 2012 proposed rule (at page 24447) that EPA has determined that VOC controls are not required for PM control in the SJV. See 72 FR 20586, 20589 (April 25, 2007), 69 FR 30006, 30007 (May 26, 2004), and 76 FR 69896, 69924 (November. 9, 2011). In addition, we note that while the EPA-approved PM plans do not address the 2006 $PM_{2.5}$ NAAQS for which the SJV has also been designated as "nonattainment," 74 FR 58688 (November 13, 2009), the nonattainment plan for the 2006 $PM_{2.5}$ NAAQS is not due until December 2012.

We note that in documents submitted with the revised SIP commitment for SJV, CDPR and CARB concluded that the 18.1 tpd emission limit could potentially be as much as 2.3 tpd higher than would an emission limit for the SJV established consistent with the interpretation of the U.S. District Court (revised in *Warmerdam*) and initially submitted in the 2007 SJV Ozone Plan and 2007 State Strategy. The calculated 2.3-ton-per-day difference reflects the use of unbackcasted 1991 PUR data (as opposed to 1990 PUR data) and a 20 percent emissions reduction commitment (as opposed to a 12 percent commitment). See CDPR staff report, pp. 3 and 4 and CARB E.O. S-09-005, p. 2. Notwithstanding the conclusion that the revised SIP commitment could potentially result in 2.3 tpd greater pesticide [VOC] emissions than assumed in the submitted 2007 SJV Ozone Plan and 2007 State Strategy, CARB concluded that such an increase would have no impact on the attainment and RFP demonstrations or any other SIP requirement in the Plan/Strategy. See CDPR staff report, p.4 and CARB E.O. S-09-005, p. 3.

Comment C-7: El Comité asserts that because the 1994 Pesticide Element calls for year-round reductions, approval of the revisions would violate CAA section 110(l) because neither CDPR nor CARB has demonstrated that the SIP revision does not backslide when the SIP revision only calls for seasonal (May through October) controls. El Comité notes our statement in the TSD that identifies the implications of the change, which would allow for unabated pesticide VOC emissions at times of the year when ozone violations could occur and avoid VOC reductions year round. They cite to the proposal TSD at p. 31.

[72] For purposes of comparison, VOC emissions in SJV are expected to decline to 339 tpd by 2023 under the EPA-approved 2007 Ozone Plan. See 76 FR 57846, 57850 (September 16, 2011)..

Response C-7: As discussed in Response C-1, CAA section 110(l) does not prohibit any backsliding and does not bar approval of a SIP revision based solely on a state's failure to accompany the revision with a demonstration of non-interference. Section 110(l) only prohibits backsliding that would interfere with any applicable requirement of the CAA.

El Comité provides no support for their position that the 1994 Pesticide Element requires year-round reductions. They do not cite to specific language in the Element and make no arguments as to why it should be interpreted to require year-around reductions. In our review of the 1994 Pesticide Element, we find nothing in it that directly addresses the issue of year around versus seasonal controls. Even with the most generous reading, the 1994 Element is at best ambiguous on the subject. This issue is also not directly addressed in EPA's rulemakings on the 1994 Ozone Plan. For these reasons, we have looked to California's stated purpose for including the 1994 Pesticide Element in its SIP and how the State relied on the emissions reductions from the Element to discern the best interpretation of its requirements regarding seasonality.

California submitted the 1994 Pesticide Element as part of its comprehensive plan to meet the 1-hour ozone standard and included reductions from this measure in the attainment demonstrations for the South Coast, Southeast Desert, Ventura County, SJV, and Sacramento nonattainment areas. From the language of the 1994 Pesticide Element itself, the reason for including a measure to reduce pesticide VOC emissions in the SIP was to address pesticide's contribution to ozone formation. See 1994 Pesticide SIP, p. 1.

Ozone is a seasonal pollutant with unhealthy levels being recorded mainly in the summer months when conditions are most conducive to its formation. The seasonality of ozone standard exceedances is reflected in EPA's policies and regulations that require ozone SIPs to include summer season inventories. See, for example, the General Preamble. We described California definition of its "summer season" (that is, its ozone season) in our proposed approval of the 1994 Ozone SIP:

> Although EPA recommends a 3 month peak ozone season as the basis for the [summer] planning inventory estimates, because of the persistence of ozone violations in California from May through October, the CARB uses a 6 month average operating day emissions estimate.

61 FR 10920, 10937.

Consistent with the summer season being the period of concern for ozone, all the emissions inventories, the rate of progress demonstrations, and the attainment demonstrations in the 1994 Ozone SIP are expressed in tons per summer day. See, for example, 61 FR 10920, 10943-44. Estimates of emissions reductions from measures are also expressed in tons per summer day.

Taken together, these facts argue that the 1994 Pesticide Element as approved can be reasonably interpreted to apply only to the ozone season. As we noted above, this ozone season was defined by California in its 1994 Ozone SIP as being from May to October, the exact period that the fumigant regulations and the revised pesticide commitment for SJV cover. We, therefore, find that approval of these SIP revisions does not violate CAA section 110(l) on the basis that they provide for seasonal controls only.

El Comité cites our statement in the proposal TSD that recommends California consider expanding the period for the requirements from May-October to include the full year. As we

stated in the TSD, these suggested revisions are not currently the basis for rule disapproval but are recommended for the next time the rule is amended. See Proposal TSD, p. 31.

D. Enforceability of the Fumigant Regulations

Comment D-1: El Comité alleges that the fumigant regulations are not enforceable because they do not guarantee that citizens and EPA have access to data to evaluate pesticide users' compliance with the fumigant application methods or permits issued by County Agricultural Commissioners (CAC). They acknowledge that a citizen may request PUR under the California Public Records Act (CPRA) but may be subject to copying fees and unable to access confidential business information (CBI).

Response D-1: Under the fumigant regulations, applicators (farm operators or pest control businesses) are required to limit their use of fumigant-specific application methods during May 1- October 31 (peak ozone season) to those methods specified in the regulations. An applicator demonstrates compliance with the regulations by reporting the details of each fumigant application (e.g. the permittee/property operator, operator ID/permit number, acres planted, acres treated, application method, crop, date, time, and location) to the CAC, which in turn, provides the data to CDPR. As El Comité acknowledges, the public can obtain PUR data by making a CPRA request to the CAC or CDPR. In addition, CDPR makes the PUR data available electronically to the public for free at the California Pesticide Information Portal (CalPIP) website at http://calpip.cdpr.ca.gov/main.cfm. The fact that the public has free online access to individual and summary PUR data enhances enforceability as compared to other SIP regulations, for which the data may be only accessible through a CPRA request.

In general, SIP rules do not need to contain specific provisions guaranteeing access to data by citizens or EPA in order to be federally enforceable. EPA can access records demonstrating compliance with the regulations by demanding them during an inspection or through a separate information demand allowed by CAA section 114.[73] We note again that citizens are not limited to enforcing based solely on records reported by sources. Under applicable CAA and regulatory provisions, any credible evidence of violation may be used. See Responses B-1 and B-2. Such credible evidence might include, for example, photographs of a fumigant application taken from a public road

Comment D-2: El Comité states that the two-year record retention time in 3 CCR section 6624(g) severely undermines enforceability of the fumigant regulations because PUR data may no longer be available by the time CDPR publishes its Annual Emissions Inventory Report, up to two years later.

Response D-2: The PUR data used to determine compliance with the fumigant regulations and to support enforcement is available to regulators and the public well before the two-year user retention provision ends. The fumigant regulations require the property operator to submit a PUR to the CAC by the 10th of the month following each fumigant application. Pest control businesses must submit the PUR to the CAC within 7 days of the application.[74] The public can

[73] Any records, reports, or information (except for CBI) that EPA obtains under section 114 is available to the public. See CAA section 114(c).

[74] 3 CCR section 6626 (a) and (b).

request PUR data from the CAC as soon as the PUR is submitted. The CAC must submit to CDPR a copy of each PUR received, and any other relevant information required by CDPR, within one calendar month after the CAC receives it.[75] CDPR publishes the PUR data online approximately one year after the growing season ends.[76] The PUR data, which is an input to the Annual Emissions Inventory Report, is not destroyed after two years, but rather it is retained and available on an on-going basis in CDPR's publicly-available, free and online PUR database.[77]

The commenter notes that in EPA's proposal TSD, EPA made a recommendation to extend recordkeeping retention to five years, similar to Title V permit retention times, in the next revision to the regulations. However, as we stated in the proposal TSD, we do not consider the two-year user retention time to significantly undermine enforceability of these regulations and is not a basis for their disapproval. Further, while Title V permits require five-year record maintenance, SIP rules in general need only require two-year record maintenance.[78] We note examples of other SIP rules that require two-year records retention.[79]

Comment D-3: El Comité states that there are no monitoring provisions that would allow for an evaluation of whether the pesticide user met the emissions reductions specified for each fumigant application method or whether the user complied with a fumigant VOC emission limit.

Response D-3: No such monitoring provisions are needed because the fumigant regulations do not require that an individual pesticide user meet either specific emissions reductions or a fumigant emission limit. Rather, they prohibit the use of certain fumigant application methods during the peak ozone season. In this way the fumigant regulations are similar to other regulations that require (or prohibit) use of certain control measures or work/management practices but do not otherwise require the source to meet specific numerical emission limits.[80] EPA has approved many regulations that require the use of specific control methods, rather than a specific emission limit. For example, SIP regulations require gasoline stations to install pre-approved vapor recovery devices but do not concurrently require them to meet an emission limit.[81] SIP rules for confined animal feeding operations, open burning, and agricultural fugitive

[75] California Food and Agricultural Code (CFAC) section 14012(b).

[76] Memorandum, Nancy Levin, EPA Region 9, to Docket EPA-R09-OAR-2012-0194, August 10, 2012, Subject: Summary of July 16, 2012 conference call between EPA and California Department of Pesticide Regulation.

[77] http://calpip.cdpr.ca.gov/main.cfm.

[78] See Guidance Document for Correcting Common VOC & Other Rule Deficiencies (A.K.A., The Little Bluebook), U.S. Environmental Protection Agency, Region IX, April 1991(revised, August 21, 2001).

[79] See, for example, Placer County APCD Rule 215 Transfer of Gasoline Into Tank Trucks, Trailers, and Railroad Tank Cars at Loading Facilities, approved 76 FR 5277 (January 31, 2011); Placer County APCD Rule 216 Organic Solvent Cleaning and Degreasing Operations, approved 75 FR 24406 (May 5, 2010); Maricopa County Air Quality Department Rule 310 Fugitive Dust from Dust-Generating Operations, approved 75 FR 78167 (December 15, 2010).

[80] CAA section 302(k) defines the terms "emission limitation" and "emission standard" to include a design, equipment, work practice or operational standard.

[81] See, for example, SJVUAPCD Rule 4622 Gasoline Transfer Into Motor Vehicle Fuel Tanks (amended December 20, 2007), approved 74 FR 56120 (October 30, 2009).

dust are examples of regulations that require the use of specific management practices rather than compliance with a specific emission limit, similar to CDPR's pesticide regulations.[82]

Under the SIP, *fumigant* VOC emission limits will apply only in Ventura County.[83] Ventura County's overall pesticide VOC emission limit is monitored through the annual emissions inventory that is calculated by CDPR and not by individual pesticide users.[84] If pesticide VOC emissions approached or exceeded the limit, then CDPR and Ventura County CAC are required to implement a fumigant limit/allowance system and to condition or deny restricted use permits to limit fumigant VOC emissions until overall pesticide VOC emissions, as reported in the annual emissions inventory, fall back below the limit for two consecutive years.[85]

Comment D-4: El Comité states that the regulations are not federally enforceable because they fail to require sources to comply with new permit conditions should the fumigant VOC emission limit and allowance system be triggered under 3 CCR section 6452.2.

Response D-4: The requirement to condition permits to comply with a fumigant VOC emission limit is only applicable to Ventura County under the SIP. Section 6452.2(e) prohibits a person from applying a field fumigant during the ozone period once the fumigant VOC emission limit is established unless their restricted material permit includes a field fumigant emission allowance or the notice of intent (NOI) to apply a fumigant is approved in writing. In addition, section 6452.2(c) requires that if Ventura County's fumigant VOC limit is triggered, the CAC must condition or deny permits in such a manner to assure that the fumigant VOC emission limit is not exceeded. These sections, which are being incorporated into the SIP, are sufficient for federal enforceability.

Comment D-5: El Comité states that CDPR has not submitted to EPA for inclusion in the SIP 1) definitions for key terms, and 2) several key regulatory sections that are referenced in the fumigant regulations. They comment that the failure to include these provisions significantly undermines enforceability of the fumigant regulations.

Response D-5: As stated in section II.E. of the proposal TSD, EPA does not consider these omissions to significantly undermine rule enforceability as the terms are generally understood by the regulated community, and the referenced sections are generally not critical to implementation of the fumigant regulations. The commenter does not provide evidence of any specific enforceability problems created by these omissions.

Comment D-6: El Comité argues that 3 CCR section 6452(b) provides for improper director's discretion for alternative methods, noting, in particular, the lack of explicit and replicable procedures for determining whether the scientific data demonstrates that the alternative method's emissions rates are no greater than other methods allowed under the regulations.

[82] SJVUAPCD Rule 4570 Confined Animal Facilities (amended October 21, 2010), approved 77 FR 2228 (January 17, 2012); Rule 4103 Open Burning (amended May 14, 2010), approved, 77 FR 214 (January 4, 2012); Rule 4550 Conservation Management Practices (amended August 19, 2004), approved 71 FR 7683 (February 14, 2006).

[83] 3 CCR section 6452.2(a) and (c)

[84] Section 6452.4(a)(2).

[85] Section 6452.2(a)

Response D-6: EPA has determined that the director discretion in section 6452(b) is not currently the basis for disapproval given the restrictions placed on the Director's ability to approve alternative methods and given the limited history of regulating fumigant application methods to reduce VOC emissions. See TSD, section II.E.

EPA's general policy regarding director's discretion is stated in 52 FR 45109 (November 24, 1987). Provisions allowing for a degree of state director discretion may be considered appropriate if explicit and replicable procedures within the rule tightly define how the discretion will be exercised to assure equivalent emissions reductions.[86] Under section 6452(b), a request for approval of an alternative application method must be accompanied by scientific data documenting the VOC emissions reductions[87] and no alternative method may be approved if its emission rate and the maximum emission rate are greater than those for any method already specified in the regulations for use in the area for that fumigant.[88] Section 6452(b)(1) also explicitly requires the CDPR Director to evaluate the submitted scientific data to determine whether: 1) the data and information provided are sufficient to estimate emissions; 2) the results are valid as indicated by the quality control data; and 3) the conditions studied represent agricultural fields fumigated.[89] A notice of interim approval of an alternative method must be published on CDPR's web site[90] and interim approvals expire after three years.[91] In addition, we note that all pesticide users are required by law to follow the federal label, state regulations, and permit conditions at the county level.[92] These provisions appropriately limit the CDPR director's discretion.[93]

E. Pesticide Emissions Inventories

Comment E-1: El Comité comments the Method Usage Fractions (MUF) for the 1991 and 2004 inventories do not have a factual foundation in the PUR.

Response E-1: The PUR reports were not required to list the fumigation application method prior to 2008; therefore, it is not possible to base the MUF off the PUR prior to that year. [94] We note that the 1990, 1991 and 2004 inventories do not have any relevance to EPA's action here.

[86] EPA Region 9, Guidance Document for Correcting Common VOC & Other Rule Deficiencies, (a.k.a., Little Bluebook), August 21, 2001.

[87] Section 6452(b)(1).

[88] Section 6452(b)(1)(A) and (B).

[89] Section 6452(c).

[90] Section 6452(d).

[91] Section 6452(e).

[92] CFAC section 12973

[93] We note that EPA has approved a limited number of other SIP rules addressing similar regulatory programs allowing for director's discretion to approve alternate methods of compliance, provided that emissions are no greater than other approved methods. See, for example, SJVUAPCD Rule 4550 Conservation Management Practices (amended August 19, 2004), Section 6.2.3.2; approved 71 FR 7683 (February 14, 2006).

[94] Usually there are several different types of application methods used for a particular fumigant in any particular NAA. Each method of use (e.g. drip, sprinkler, shank, tarp, etc.) represents a fraction of the total number

Comment E-2: El Comité comments that the validity of the MUF for the 1991 inventory for all fumigants but 1,3-dichloropropene are not verifiable.

Response E-2: CDPR provided a detailed explanation of its process for determining the frequency of use of historical fumigant methods for the 1991 inventory as well as the 1990 inventory (which is the basis for calculating reductions) in the Barry memorandum. Prior to 2008 the MUF were based on grower/applicator surveys, use data, expert opinion, and regulatory history. Since 2008, applicators have been required to report application methods on the PUR, so recent MUF calculations are based on empirical data. EPA has been presented with no evidence to dispute that CDPR used best available data to develop the MUF for the baseline inventory.

As we discussed in Response B-1, except for the analysis required by CAA section 110(l), the SJV and Ventura County 1990 baseline (including the MUF used to calculate them) are no longer at issue now that the State has fixed the maximum level of pesticide VOC emissions allowed in the SJV at 18.1 tpd and in Ventura County at 3.0 tpd.

Comment E-3: El Comité comments that the field studies of Application Method Adjustment Factor (AMAF) have highly variable results even among similar studies and are therefore highly uncertain.

Response E-3: See Response E-6 below.

Comment E-4: El Comité comments that previous reviews have noted uncertainties in AMAF estimates and concluded that some AMAF proposed by CDPR were not conservative enough, citing a October 17, 2007 letter from Brian Hill and Anne Katten to Brent Newell (included as Exhibit 28 to their comment letter).

Response E-4: See Response E-6 below.

Comment E-5: El Comité comments that CDPR's AMAF are based on unrepresentative field fumigation studies conducted in other states under cool soil conditions and therefore do not provide an accurate estimate of emissions from California fumigations conducted at high temperatures in the Central Valley during the peak ozone season from May to October. They also comment that studies conducted under worst-case scenarios have been excluded from the group of studies on which the fumigant application regulations are based.

Response E-5: Similar comments were raised to CDPR during the comment periods prior to the adoption of the 2008 fumigant regulations and to CARB during the comment period prior to the adoption of the 2007 State Strategy (specifically on the revisions to the 1994 Pesticide Element for Ventura County that were included as Appendix H to the State Strategy). CDPR responded to these comments in the final Barry Memorandum (pp. 15-17) including listing studies it did not use and the reason for excluding these studies (see Appendix 4 to the memorandum). CARB also provided responses.[95] Both stated that the studies included had been reviewed and accepted as

of methods used and is referred to as the Method Use Fraction (MUF). The sum of all MUFs for any particular (NAA/fumigant AI) combination is one. See CDPR's Revised 2010 Pesticide VOC Emissions Report, p. 13.

[95] CARB, Environmental Analysis for the Proposed Revision to the Pesticide Commitment of the 1994 Ozone SIP for the Ventura County Nonattainment Area, Revised August 13, 2007 ("CARB August 2007 Environmental Analysis").

sufficient to provide reliable data and were conducted under a variety of conditions and locations.

In particular, El Comité expressed concern that emissions would typically be higher in the very hot SJV compared to emissions in much cooler study areas. CDPR and EPA have both noted that the effects of temperature on emissions are complex. While evaporation and dissipation rates are expected to increase with temperature, thereby increasing emissions, chemical degradation rates would also increase, tending to lower emission rates. Temperature and humidity have been shown to increase tarp permeability.[96] CDPR reports observing high flux, high emissions, and high concentrations of methyl bromide from applications of methyl bromide in winter. CDPR found no correlation between Julian date and emissions from methyl bromide applications.[97] EPA reports that in field scale studies of soil fumigations, temperatures were observed to fluctuate without discernible differences in emission patterns.[98] In a subsequent report (see footnote 96), based on new data, EPA established buffer zones based on studies with soil temperatures averaging around 70 degrees F. EPA evaluated whether buffer zone credits (i.e., reduced emission credits) could be applied for fumigant applications done at soil temperatures of 50 degrees F or lower. Methyl bromide applications are not eligible for any buffer zone credits based on temperature due to its high vapor pressure, but chloropicrin, metam sodium, metam potassium, and dazomet all qualify for a 10 percent buffer zone credit if applied at $\leq$ 50 degrees F.

The worst-case scenario study cited by El Comité is a 1993 CARB/CDPR study. This study was rejected by CDPR because of issues with study design and sample handling. CARB August 2007 Environmental Analysis, p. 9.

Comment E-6: El Comité argues that because the natural variability in flux rates (the rate at which the fumigant escapes from the soil) is large, a single study (or even several studies) will not provide an accurate estimate of actual emissions. They comment that it is not uncommon for flux rates for different field fumigation studies, even those conducted under very similar application conditions, to vary by a factor of two to four.

Response: E-6: CDPR responded to this comment, which was also made during the 45-day comment period on the initial proposal of the fumigant regulations in July 2007. It agreed that flux rates vary and have chosen to average flux rates to get the most accurate picture of overall emissions. Their response, which is supported by CARB, is as follows:

> DPR agrees that the variability in flux rates (emissions) between applications is large. For fumigants and application methods with multiple studies, the standard deviations of the emissions are approximately 50 percent. DPR has chosen to use the average flux rates to

[96] Memorandum, Jeffrey L. Dawson and Shalu Shelat, EPA to John Leahy, EPA, Subject: Methyl Bromide (PC Code 053201), Chloropicrin (PC Code 081501), Dazomet (PC Code 035602), Metam Sodium and Potassium (PC Codes 039003 & 039002), MITI (PC Code 068103), DP Barcode 385314, Second Update To Health Effects Division Recommendations for Good Agricultural Practices and Associated Buffer Credits, January 11, 2011.

[97] Alternatives Analysis for the Fumigant VOC Regulations, Attachment 3, Evaluation of the Effect of Temperature on Fumigant Emissions, p. 6.

[98] Jeffrey L. Dawson and Charles Smith, EPA, to John Leahy, EPA, Factors Which Impact Soil Fumigant Emissions - Evaluation For Use In Soil Fumigant Buffer Zone Credit Factor Approach, U.S. EPA Office of Prevention, Pesticides, and Toxic Substances, June 9, 2008.

> estimate emissions for three reasons. First, the emissions inventory represents the aggregate emissions from all agricultural and structural pesticide applications within a region over several months. The average flux rates represent the most accurate estimate of aggregate emissions. Second, all pesticide applications included in DPR's inventory represent its most accurate and consistent estimate of emissions, for both the base year and subsequent years. Using a consistent method to estimate emissions is essential for making relative comparisons and determining compliance with the SIP commitments. Using the most accurate estimates for some applications and high-end estimates for other applications would skew the inventory and make relative comparisons unreliable. Third, even if DPR were to use high-end emission estimates, they would affect both current emissions and emissions for the 1991 base year. Estimates of the 1991 base year emissions are generally more uncertain, than current emissions. DPR would likely apply a larger uncertainty factor to the 1991 base year than current emissions, and the emission reductions achieved would be larger than currently estimated using the average flux rates.[99]

Therefore we conclude that CDPR took a reasoned approach to establishing AMAF based on the available science.

Comment E-7: El Comité argues that CDPR has not presented any evidence supporting its estimates of historical fumigant application methods nor has it made public the details of the process by which this information was obtained.

Response E-7: EPA considered the process described in the Barry memorandum as a reasonable basis on which to support estimates of historical fumigant application methods. See also Responses E-1 and E-2.

Comment E-8: El Comité comments that the alleged deficiencies in the determination of the historical MUF and current AMAF that they have identified are important because CDPR's strategy to meet its VOC reduction obligations rely principally on these inventory adjustments and that it has used these adjustments to offset large increases in pesticide use that have occurred since 1991, citing to a graph on unadjusted VOC emissions from pesticides in CDPR's 2010 Annual Pesticide VOC Emissions Report. They argue that these alleged inventory manipulations are problematic given the holding in *Warmerdam* that prevents citizens and EPA from enforcing noncompliance with the California SIP Pesticide Element. We note that CDPR committed to reduce VOC emissions from pesticide use and not to reduce pesticide use.

Response E-8: For the reasons discussed above we do not agree that CDPR has inappropriately established MUF and AMAF but rather has used the best available data to determine the factors that affect VOC emissions from the use of pesticides including fumigants.

As we have explained previously, now that CDPR has fixed the emission limit in both Ventura County and the SJV, the 1990 baseline inventories (including the MUF that are used to calculate them) are only relevant to determining whether approvals of these emission limits are allowed under the non-interference provisions of CAA section 110(l). See Response B-1. Once these fixed emission limits are approved, neither the 1990 baselines for these areas nor the

[99] Rulemaking File For Regulations Filed and in Effect on January 8, 2008; Final Statement of Reasons Attachment A: Summary of Comments Received During the 45-Day Comment Period and DPR's Response.

calculations procedures used have any continuing relevance and therefore do not need to be enforceable.

We have also explained that the calculation procedures for determining the subsequent year inventories are part of these emission limits' compliance monitoring requirements and as such are fully enforceable under CAA section 304. We have also noted that citizens are not restricted to using either CDPR's emissions inventories or its calculation methodologies to enforce the emission limits but may use any credible evidence to do so. See Response D-1.

Finally, *unadjusted* pesticide VOC emissions are an incorrect and misleading measure to judge progress or lack thereof in reducing VOC emissions from pesticides. Unadjusted pesticide VOC emissions are the hypothetical amount of emissions that would be emitted if all of a fumigant's VOC content is emitted to the air. Unadjusted pesticide VOC emissions do not reflect actual emissions to the air. El Comité does not object to the basic premise that the method used to apply a fumigant affects how much of that fumigant's VOC is emitted to the air. Both the effectiveness of a particular method at reducing VOC emissions and the range of methods used must be taken into account to appropriately estimate VOC emissions from fumigants and thus pesticides as a whole. CDPR's *adjusted* pesticide VOC emissions estimates account for these factors and therefore are the appropriate measures to judge progress in reducing VOC emissions from pesticides. Adjusted pesticide VOC emissions in all five areas subject to the Pesticide Element have shown reductions in VOC emissions from the SIP's baseline year of 1990.[100]

Comment E-9: El Comité comments that EPA's approval of the static baseline inventory from which the SJV pesticide VOC emission limit of 18.1 tpd is calculated would be arbitrary and capricious because it is allegedly based in part on unsupported assumptions regarding the methods of use. In support of their comments, El Comité cites to arguments made earlier in their comment letter (p. 15) and the Kegley letter (included as Exhibit 30 to their comment letter).[101] They further comment that EPA should not accept the baseline inventory given CDPR's alleged history of inventory manipulation, citing to a memorandum from Mark Pepple to Paul Gosselin, February 13, 1997 and *El Comité para el Bienestar de Earlimart v. Helliker*, 416 F.Supp.2d 912, 923, 933-934 (E.D. Cal. 2006) as evidence of this alleged manipulation.

Response E-9: We believe that by "static baseline inventory" El Comité means the 1990 baseline inventory from which CDPR calculated the 18.1 tpd emission limit for SJV.

California did not submit for SIP approval, and EPA is not approving, the 1990 baseline emissions inventory for SJV (or for any other area). We listed the SIP submittals and the provisions in those SIP submittals that it intended to include in the SIP on pages 24442 to 24443 of our proposal. These SIP submittals do not include the 1990 SJV baseline inventory. To the

[100] See Revised 2010 Pesticide VOC Emissions Report, Table 5, p. 20.

[101] The Kegley Letter is a letter from Susan Kegley, Ph.D., Senior Scientist, Pesticide Action Network et al. to Linda Irokawa-Otani, California Department of Pesticide Regulation, July 13, 2007. It conveys comments of Californians for Pesticide Reform and others on CDPR's 2007 proposal to adopt fumigant regulations and a revised SIP commitment for SJV. It provides a number of comments and raises a series of issues with the proposed regulations and commitment. In their letter here, El Comité references only to the specific comments in the Kegley letter on the method use factors. EPA is therefore, limiting its responses to these specific comments (which we note closely duplicate the comments on pages 14-16 of their letter). Because El Comité has not referenced any other parts of the Kegley letter, it is precluded from raising in any subsequent appeal of this final action, other issues in the Kegley letter that are not otherwise specifically raised in their comment letter here.

extent that this inventory is relevant to today's action, it is in the context of our CAA section 110(l) analysis of the SJV emission limit. We addressed comments on this issue in Response C-6. We have also addressed El Comité's comments (including those in the Kegley letter) on the historical MUF in Responses E-1 and E-2.

The evidence the El Comité cites does not support their accusation that CDPR has manipulated the baseline inventory to avoid adopting regulations. In the Pepple memorandum, CDPR was stating its concerns with the accuracy of the CARB methodology for calculating pesticide emissions: "We consider this option because the agricultural use figures determined by the ARB methodology appeared to be low compared to successive years (which were all based on PUR data) and the commercial structural use figures seems to be too high."[102] CDPR was also stating its concern that the CARB inventory was not available: "In the SIP, we state that the 1990 figure will be based on a backcast of 1991 data. It is uncertain when the CARB will provide the backcasted figure."[103] The date of the Pepple memorandum is February 13, 1997, just a few months before the June 15, 1997 deadline for CDPR to submit regulations to EPA if they were needed to achieve the required emissions reduction. It is therefore not surprising that CDPR would then be evaluating alternative ways to calculate the 1990 pesticide VOC emissions inventory because 1) it lacked the necessary CARB data, 2) did not know when that data would be available, and 3) had substantial concerns about accuracy of CARB's methodology. This is not evidence of "inventory manipulation" but a rather of a good faith effort by CDPR to meet what it believed to be its SIP obligations.

We note that the 1990 baseline emissions inventory that CDPR was proposing to replace were based on CARB's "current methodology." Pepple memorandum, p. 1 ("The 1990 base year figures are those estimated by ARB using their current methodology.") It was not an inventory backcasted from 1991 PUR data. *Id*. ("It is uncertain when the ARB will provide the backcast figure.") It was also not an inventory based on unbackcasted 1991 PUR data.[104] In the Pepple memorandum, CDPR was proposing to replace the then-existing 1990 baseline inventory with an inventory that was calculated using the same methodology ("multiplying the emission factor for each pesticide product by the use of that product") as the successive year inventories. Using

[102] No records seem to exist of the CARB methodology; however, given the language in the Pepple memorandum, it can be understood that the CARB methodology did not use PUR data since CDPR was recommending, as an alternative, a methodology that was based on PUR data and thus more consistent with successive year inventories.

[103] To EPA's knowledge, CDPR has never prepared a 1990 baseline inventory using1991 PUR data adjusted to reflect 1990 usage. While CDPR did developed a *1991* inventory using 1991 PUR data (See, for example, memorandum, Tamara L. Roush, CDPR to John S. Sanders, CDPR, October 24, 2006, "2006 Update to the Pesticide VOC Inventory Estimated Emissions 1990-2004," p. 2) , that inventory was not backcasted to 1990. El Comité's comments here assume that this backcasted 1990 emissions inventory, if prepared, would show lower emissions levels than the 1990 inventory prepared using 1990 PUR data, resulting in lower emission limits. There is nothing in the record that supports this assumption. As we discuss in Response C-6, we do not read the 1994 Pesticide Element to bar the use of 1990 PUR data to calculate the 1990 baseline.

[104] El Comité's argument that the Pepple memorandum demonstrates "inventory manipulations" seems to rest on the assumption that CDPR was proposing to substitute a different inventory for the one they believe was called for in the Pesticide SIP; that is, one calculated by multiplying pesticide usage backcasted to 1990 from 1991 by the VOC emissions factor. In fact, CDPR was proposing to substitute in an inventory calculated using a methodology that more closely followed the SIP for one that was not even based on PUR data.

consistent methodologies for preparing inventories that are to be compared is sound practice and does not constitute "inventory manipulation."[105]

We also note that the "PUR methodology" did not universally make it easier to show compliance with the reduction requirements. The PUR methodology decreased estimated baseline pesticide VOC emissions levels in both South Coast and Sacramento, making it harder to show compliance. See Pepple memorandum, p. 1.

In *El Comité*, the District court interpreted the 1994 Pesticide SIP to mandate the use of 1991 PUR data to calculate the 1990 baseline inventory and found CDPR had not done so. The court did not find that if CDPR had used the 1991 PUR data, the results would have shown the need for additional regulation. In fact, there is nothing in the record that shows that additional regulations would have been needed if CDPR had used 1991 data *backcasted* to 1990 to determine the 1990 baseline inventory.

F. Necessary Assurances under CAA Section 110(a)(2)(e)

Comment F-1: El Comité states that the fumigant regulations are unenforceable because they do not provide a funding mechanism, and because CDPR has not demonstrated under CAA section 110(a)(2)(E) that the state and CAC have adequate personnel, funding and authority to implement and enforce the regulations.

Response F-1: We disagree that the fumigant regulations are unenforceable if they do not provide a mechanism to fund enforcement. Nothing in the CAA or EPA regulations require a SIP rule to include a rule-specific funding mechanism in order to be enforceable. If that were so, every SIP-approved rule would need to contain a specific funding mechanism before EPA could incorporate into SIP, which is not the case.

CAA section 110(a)(2)(e) requires states to provide "necessary assurances that the State…will have adequate personnel, funding, and authority under State (and, as appropriate, local) law to carry out such implementation plan." CDPR has provided sufficient assurance that it has adequate funding (as well as personnel and authority) to implement the regulations.

CDPR funds CAC on an annual basis to conduct inspections and enforcement activities. Funding derives from an assessment on pesticide sales. CDPR collects 21 mill (or 2.1 cents) per dollar, of which approximately 7.6 mill is designated for CAC pesticide use inspection and enforcement activities.[106] In 2006 CDPR and the California Agricultural Commission and Sealers Association entered into a Memorandum of Understanding that explains the process for distributing funds.[107]

[105] We also note that the proposed PUR methodology is consistent with the calculation method laid out in the SIP: "The baseline inventory will be calculated by summing the estimated 1990 emissions of each agricultural and commercial structural use pesticide. Emissions will be calculated by multiplying the VOC Emission Factor value for each product by the adjusted use of that product in 1990." 1994 Pesticide SIP, pp. 5-6.

[106] 3 CCR section 6386. Established Rate; CFAC sections 12841 and, 12841.3. See also Memorandum, Nancy Levin, EPA Region 9, to Docket EPA-R09-OAR-2012-0194, August 10, 2012, Subject: Summary of July 16, 2012 conference call between EPA and California Department of Pesticide Regulation.

[107] CDFA, Disbursement of Residual Mill Assessment Funds To Enhance Local Pesticide Enforcement Programs, May 2006, found at

The CAC have conducted 3,154 field fumigant inspections since January 1, 2008.[108] In 2010-2011, CAC made 724 field fumigant inspections and 2,130 structural fumigation inspections statewide.[109] In addition, CAC must conduct pre-application site evaluation inspections for at least 5 percent of all sites identified in permits or notices of intent (NOI) to apply pesticides for agricultural use.[110] In 2010-2011, CAC conducted a total of 7,941 pre-application inspections out of a total of 136,491 NOI,[111] or 5.8 percent of NOI reviewed.

Both CDPR and CAC enforcement authority is derived from State law and regulation. See California Food and Agricultural Code (CFAC) section 14004, See also, CFAC section 2281 and 11501.5; 3 CCR sections 6140 and 6128.[112] Beyond its enforcement authorities, California law provides CDPR with the authority to place limitations on the quantity, area, and manner of application to reduce pesticide emissions through restricted materials permit conditions. See CFAC sections 14006.5; 3 CCR section 6412. Permits to use restricted materials are issued by the CAC, who has broad discretion to condition the permits on additional use restrictions. See CFAC section 14006. CDPR has oversight of the permit process and recommends conditions to be included in the CAC's permits. It can also enact use restrictions by regulation. See CFAC section 14005. In addition, for products containing a new active ingredient, CDPR may place appropriate restrictions on a product's use, including limitations on the quantity, area, and manner of application and require low VOC formulations as a condition of registration. See CFAC section 12824.[113] See also Response D-4.

Comment F-2: El Comité asserts that approval of the revised SIP commitment for the SJV and the fumigant regulations would be arbitrary and capricious and a violation of CAA section 110(a)(2)(E) because neither CDPR nor CARB have provided a demonstration that the commitment and regulations are not prohibited by Title VI of the Civil Rights Act and EPA's regulations implementing Title VI.

Response F-2: In addition to requiring a state to provide necessary assurances regarding adequate resources and authority for implementation, CAA section 110 (a)(2)(E) also requires a state to provide "necessary assurances that the State . . . is not prohibited by any provision of Federal or State law from carrying out such [SIP]."

http://www.cdfa.ca.gov/exec/county/documents/DISBURSMENT_OF_RESIDUAL_MILL_ASSESSMENT_FUNDS_TO_ENHANCE.pdf.

[108] Email and attachment from Ken Everett, CDPR to Nancy Levin, EPA, August 1, 2008.

[109] See CDPR, California Statewide Pesticide Regulatory Activities Summary Between July 2010 and June 2011 (http://www.cdpr.ca.gov/docs/enforce/prasr/10-11prasr.pdf), page 31.

[110] 3 CCR section 6436.

[111] See CDPR, California Statewide Pesticide Regulatory Activities Summary Between July 2010 and June 2011, pp. 31 and 33 (found at http://www.cdpr.ca.gov/docs/enforce/prasr/10-11prasr.pdf,).

[112] The California Food and Agricultural Code can be viewed at http://www.leginfo.ca.gov/cgi-bin/calawquery?codesection=fac. Title 3 of the California Code of Regulations can be view at http://www.cdpr.ca.gov/docs/legbills/calcode/subchpte.htm.

[113] CDPR describes its authorities on page 1 of the Revised SIP Commitment for the SJV.

El Comité asserts that California failed to provide a "demonstration" that its proposed revisions are not prohibited by Title VI of the Civil Rights Act.[114] Section 110(a)(2)(E), however, does not require a state to "demonstrate" it is not prohibited by Federal or State law from implementing its proposed SIP revision. Rather, this section requires a state to provide "necessary assurances" of this. Courts have given EPA ample discretion in deciding what assurances are "necessary" and have held that a general assurance or certification is sufficient. ("EPA is entitled to rely on a state's certification unless it is clear that the SIP violates state law and proof thereof…is presented to EPA." *BCCA Appeal Group v. EPA*, 355 F.3d 817, 830 fn 11 (5th Cir. 2003)).

El Comité does not allege a violation of Title VI by either CDPR or CARB nor does it provide evidence that either the revised SIP commitment for the SJV and/or the fumigant regulations would result in any adverse environmental impacts. While El Comité includes in their letter several statements on fumigant usage and fumigant VOC emissions in Ventura County and the SJV[115] (citing various CDPR documents as the sources), it provides no evidence that these usage rates or pesticide VOC emissions rates are either the result of implementing the revised SIP commitment and/or fumigant regulations or would not have resulted absent the implementation of the commitment and regulations.

On the other hand, California has provided multiple evaluations that show the revised SIP commitment for SJV and the fumigant regulations will improve California's air quality by reducing VOC emissions from pesticides, will not result in any significant adverse environmental impacts, and, in fact, by reducing VOCs, will improve air quality and assist the areas in their progress toward attainment of the ozone standards. These evaluations include:

- CDPR's 2007 identification of no significant adverse environmental effects that can reasonably be expected to occur from implementing the fumigant regulations found on pages 22-23of the Initial Statement of Reasons and Public Report Pertaining to Field Fumigant Reductions.[116]

[114] Title VI of the Civil Rights Act of 1964 prohibits discrimination by entities receiving federal funds. 42 U.S.C. § 2000d. Section 601 provides that no person shall, "on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity" covered by Title VI. *Id.* Section 602 authorizes federal agencies that provide federal funding assistance to issue regulations to effectuate the anti-discrimination provisions of Title VI. *Id.* at § 2000d-1. Pursuant to section 602, EPA promulgated regulations prohibiting EPA funding recipients from engaging in discrimination. See 40 CFR 7.30 and 7.35.

[115] These statements include this misleading one: "[T]otal unadjusted pesticide VOC emissions in the Ventura Nonattainment Area is [sic] higher in 2010 than in the years 1995-2001," citing CDPR 2010 Inventory at 18, Figure 2. Unadjusted pesticide VOC emissions are the hypothetical amount of emissions that would be emitted if all of a fumigant's VOC content is emitted to the air. Unadjusted pesticide VOC emissions do not reflect actual emissions to the air. The method used to apply a fumigant affects how much of that fumigant's VOC is emitted to the air and there are a variety of methods used to apply most fumigants. Both the effectiveness of a particular method at reducing VOC emissions and the range of methods used must be taken into account to appropriately estimate VOC emissions from fumigants and thus pesticides as a whole. CDPR's *adjusted* pesticide VOC emissions estimates do account for these factors and therefore are the correct measure to judge progress in reducing VOC emissions from pesticides. Adjusted pesticide VOC emissions in Ventura County have show reductions in VOC emissions from the SIP's baseline year of 1990. See CDPR 2010 Inventory, Table 5, p. 19.

[116] This document is on pages 84-104 (pdf count) of enclosure 4 to the memorandum, Christopher Reardon, Chief Deputy Director, California Department of Pesticide Regulation to James Goldstene, Executive

- CARB's environmental impact analysis of its 2007 State Strategy which included evaluation of the potential environmental impacts of the fumigant regulations and the revisions to the Ventura portion of the Pesticide SIP (May 7, 2007).[117]
- CARB's Revised Environmental Analysis for the Proposed Revisions to the Pesticide Commitment of the 1994 Ozone SIP for the Ventura County Nonattainment Area (August 13, 2007).[118]
- CDPR's "Staff Report on the Department of Pesticide Regulation's Proposed SIP Commitment for San Joaquin Valley,"[119]
- CDPR's identification of no significant adverse environmental effect and response to comments on fumigants regulations and revised SIP commitment for SJV found in Final Statement of Reasons and Public Report, 2009.[120]
- CARB's Executive Order S-09-005 relating to Revised Pesticide Commitment for SJV (October 12, 2009).[121]

Both CDPR and CARB receive annual grants from EPA and have done so for many years. As grant recipients, both agencies must certify their compliance with Title VI and have done so in every year since the revised commitment and fumigant regulations were first adopted by CDPR in 2007 and submitted by CARB in 2009.[122] [123] In addition, by letter dated August 7, 2012, CDPR provided EPA a further description of the ways in which its pesticide regulatory program, including the VOC rule EPA is approving today, complies with sections 601 and 602

Officer, California Air Resources Board; October 5, 2009, Subject: Fumigant Volatile Organic Compound Regulations which can be found in the docket for this rule.

[117] This document is Appendix E to CARB's *Proposed State Strategy for California's 2007 State Implementation Plan* (as adopted September 7, 2007) which can be found at http://www.arb.ca.gov/planning/sip/2007sip/apr07draft/revdrftappe.pdf and in the docket for this rule. We approved the revision to the Ventura portion of the Pesticide SIP in 2008. See 73 FR 41277 (July 18, 2008).

[118] This document can be found at http://www.arb.ca.gov/planning/sip/2007sip/apr07draft/ventanalysis.pdf and in the docket for this rule.

[119] This document is Enclosure 3 to the memorandum, Christopher Reardon, Chief Deputy Director, California Department of Pesticide Regulation, to James Goldstene, Executive Officer, California Air Resources Board; October 5, 2009, Subject: Amendment to the Pesticide Element of the Ozone State Implementation Plan which can be found in the docket for this rule.

[120] This document is Enclosure 5 to the memorandum, Christopher Reardon, Chief Deputy Director, California Department of Pesticide Regulation, to James Goldstene, Executive Officer, California Air Resources Board; October 5, 2009, Subject: Amendment to the Pesticide Element of the Ozone State Implementation Plan which can be found in the docket for this rule.

[121] This document can be found in the docket for this rule.

[122] See, for example, EPA Form 4700-4, Preaward Compliance Review Report for All Applicants and Recipients Requesting EPA Financial Assistance for CDPR, May 10, 2010 and EPA Form 4700-4, Preaward Compliance Review Report for All Applicants and Recipients Requesting EPA Financial Assistance for CARB, August 13, 2010.

[123] It is also worthy of note that, to EPA's knowledge, none of the groups that signed the El Comité letter raised Title VI concerns during CDPR's rulemaking process to adopt and amend the fumigant regulations or adopt the revised SIP commitment for SJV nor did they raise any Title VI concerns to EPA while CDPR and CARB were going through their respective rulemaking processes.

of Title VI of the Civil Rights Act of 1964 (Title VI) that govern recipients of federal financial assistance.[124] Thus, EPA concludes California has provided the necessary assurances pursuant to 110(a)(2)(e).

G. EPA's Response to the Ninth Circuit Court of Appeals Remand in *Association of Irritated Residents* Case

Comment G-1: El Comité asserts that EPA offered no factual basis or reasoned explanation for concluding that, with the addition of the fumigant regulations, the revised SIP commitment for SJV is sufficiently enforceable, and because EPA has failed to provide an explanation, its approval of the fumigant regulations and the revised SIP commitment as enforceable in tandem is arbitrary and capricious.

Response G-1: On page 24450 of our April 24, 2012 proposed rule, we concluded that:

> ... there is no need to rescind or otherwise modify our 1997 approval of the Pesticide Element or our 2009 approval of PEST-1 notwithstanding the deficiencies in enforceability in the Pesticide Element due to the absence of an enforceable mechanism like the Wells Memorandum. In short, this is because CDPR's regulations and revised commitment for San Joaquin Valley provide the enforceable mechanism that would otherwise be lacking in the Pesticide Element. If EPA approves the regulations and commitment, as proposed herein, then the Pesticide Element would be fulfilled. If, after consideration of comments, EPA concludes that the regulations and commitment do not meet the applicable CAA requirements, then the decision regarding EPA's previous actions on the Pesticide Element would need to be reconsidered.

As explained further here and in other sections of this document, EPA is concluding CDPR's regulations and the commitment meet the applicable CAA requirements, and thus, we are finalizing our determination that the commitments in the 1994 Pesticide Element have been fulfilled, which in turn, forms the basis for our final decision not to rescind or otherwise modify our 1997 approval of the Pesticide Element or our 2009 approval of PEST-1. Specifically, as to SJV, we stated:

> For San Joaquin Valley, CDPR's regulations restricting fumigant application methods and establishing requirements on CDPR to inventory and report VOC emissions from pesticide use apply just as they do in the other four nonattainment areas. While these regulations and other measures have decreased VOC emissions from pesticide use in San Joaquin Valley such that current VOC emissions are approximately 18 percent less than 1990 levels, CDPR concluded that a mechanism was needed to supplement the regulations to ensure that the 12 percent emission reduction target would be met in the San Joaquin Valley. The supplemental mechanism chosen by CDPR is the adoption of a commitment, which we are proposing to approve in today's action, to manage VOC emissions from commercial structural and agricultural pesticide use, such that the related VOC emissions do not exceed 18.1 tons per day in the San Joaquin Valley. This level of emissions reflects a 12 percent emissions reduction from 1990 level of VOC emissions

[124] Letter, Brian R. Leahy, Director, CDPR to Jared Blumenfeld, Regional Administrator, EPA Region 9, August 7, 2012, which can be found in the docket for this rule.

> from pesticide use. The specific measures that CDPR would undertake to bring emissions back down to that level in the event that the annual inventory reveals that the 18.1 tons per day emissions level had been exceeded are vague. Considered in isolation, the revised commitment for San Joaquin Valley changes the form of the commitment in the Pesticide Element for the valley but does not represent an enforceable measure for SIP purposes. However, when viewed in light of the CDPR's regulations, the combination of the commitment and fumigant regulations does meet the minimum requirements for enforceability of SIP measures and reasonably ensures that the 12 percent emissions reduction target from the Pesticide Element would be achieved in San Joaquin Valley.

77 FR 24441, 24450.

Factual support for our conclusion is found in the CDPR staff report on the revised SIP commitment for SJV which provides a table of baseline pesticide emissions in SJV (19.3 tpd) and an estimate of the VOC emissions reductions (1.5 tpd) due to CDPR's fumigant regulations (that are being approved as part of this action). Based on the data in CDPR's table, the fumigant regulations reduce baseline pesticide emissions to 17.8 tpd, which is 0.3 tpd less than the 18.1 tpd emissions limit (that derives from the 12 percent emissions reduction commitment from the existing California SIP Pesticide Element). Therefore, in most years, CDPR's fumigant regulations alone would safeguard the emission limit.

CDPR acknowledges, however, that fumigant use varies from year to year and could in some years be unusually high, raising the potential for the emission limit to be exceeded. This is why CDPR commits (1) to implement restrictions to reduce VOC emissions from non-fumigant pesticides by 2014 and (2) to commit to manage pesticide VOC emissions in SJV through annual emissions inventories and take further steps to reduce pesticide VOC emissions if necessary to bring such emissions back down below the emission limit.

Comment G-2: El Comité argues that EPA's rationale for finding the combination of the revised SIP commitment for SJV and the fumigant regulations enforceable is unfounded because three quarters of all adjusted pesticide VOC emissions in the SJV in 2010 came from non-fumigants and SJV exceeded the 18.1 tpd emission limit in 2005 and 2006 "despite CDPR's use of an adjusted inventory for fumigants in the Valley." They argue further that controlling only one-quarter of the pesticide VOC inventory in the Valley with the fumigant regulations does not ensure that the revised SIP commitment does not meet the CAA requirement for enforceability.

Response G-2: El Comité cites CDPR's 2010 annual inventory of pesticide VOC emissions as the source for their claim that VOC emissions in SJV exceeded the 18.1 tpd limit in 2005 and 2006 and that fumigant VOC emissions represent only 25 percent of the overall total pesticide emissions in SJV. Based on our review of CDPR's Revised 2010 Pesticide VOC Emissions Report, we confirm El Comité's factual statements but believe that the report supports EPA's conclusion that the combination of the commitment and fumigant regulations does meet the minimum requirements for enforceability of SIP measures and reasonably ensures that the 12 percent emissions reduction target from the Pesticide Element would be achieved in SJV. This is because (1) the emission limit of 18.1 tpd has not been exceeded since adoption of CDPR's fumigant regulations in 2008; and (2) the percentage of pesticide VOC emissions due to fumigant use has declined from an average of 34 percent during the 3-year period (2005-2007) prior to implementation of CDPR's fumigant regulations to an average of 24 percent during the 3-year period (2008-2010) after implementation. See tables 5 and 6a of Revised 2010 Pesticide

VOC Emissions Report. This decline in the percentage of pesticide VOC emissions due to fumigant use is exactly the effect that would be expected in light of the implementation of CDPR's restrictions on the use of higher emitting application methods, and it demonstrates that CDPR's fumigant regulations are effective at reducing pesticide VOC emissions in the SJV and in maintaining compliance with the 18.1 tpd emission limit.

Comment G-3: El Comité claims that EPA cannot rely on CDPR's fumigant regulations as the basis to conclude that the revised SIP commitment for SJV is enforceable because the regulations themselves are unenforceable.

Response G-3: As discussed in the proposal (See 77 FR 24441, 24444) and in the responses to comments in sections B and D above, we have found the fumigant regulations to be enforceable.

Comment G-4: El Comité argues that because the SIP revision lacks a commitment to retain the fumigant regulations, EPA's rationale for using the fumigant regulations as its basis for finding the SIP revision enforceable is "illusory." El Comité asserts that CDPR could rescind the fumigant regulations and CARB could offer new VOC controls applicable to other sources to support a section 110(l) demonstration.

Response G-4: The SIP revision does not need to include a commitment to retain the fumigant regulations. If CDPR were to rescind the fumigant regulations, such rescission must be approved by EPA as a SIP revision to be rescinded as a part of the California SIP. The CAA does not allow unilateral changes to SIPs by states. Moreover, EPA has determined that the fumigant regulations are required to meet the section 182(b)(2) RACT requirement in the SJV, so for at least for SJV, California would need to demonstrate that the SIP still provides for RACT in SJV absent the fumigant regulations. Simple substitution of the fumigant regulations with new VOC emissions controls may not suffice in SJV due to the RACT requirement for the pesticide use source category.

In addition, to approve any rescission of CDPR's fumigant regulations submitted as a SIP revision, we would need to find that such rescission would not interfere with RFP and attainment of the NAAQS or any other applicable requirement of the Act pursuant to CAA section 110(l), and would therefore need to consider the effect of the rescission on the continued enforceability of the California SIP Pesticide Element and would need to consider the emissions impacts in the context of the RFP and attainment needs of the areas for which the regulations provide emissions reductions. Lastly, we note that any action EPA would take on such a rescission of the fumigant regulations would be subject to the normal public notice and comment procedures that EPA follows for all actions on SIPs and SIP revisions

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Air Division, EPA Region 9 —August 14, 2012